

The essential guide for all Atari computer users

ATARI World

Issue 7 November 1995

£3.25

Timeworks

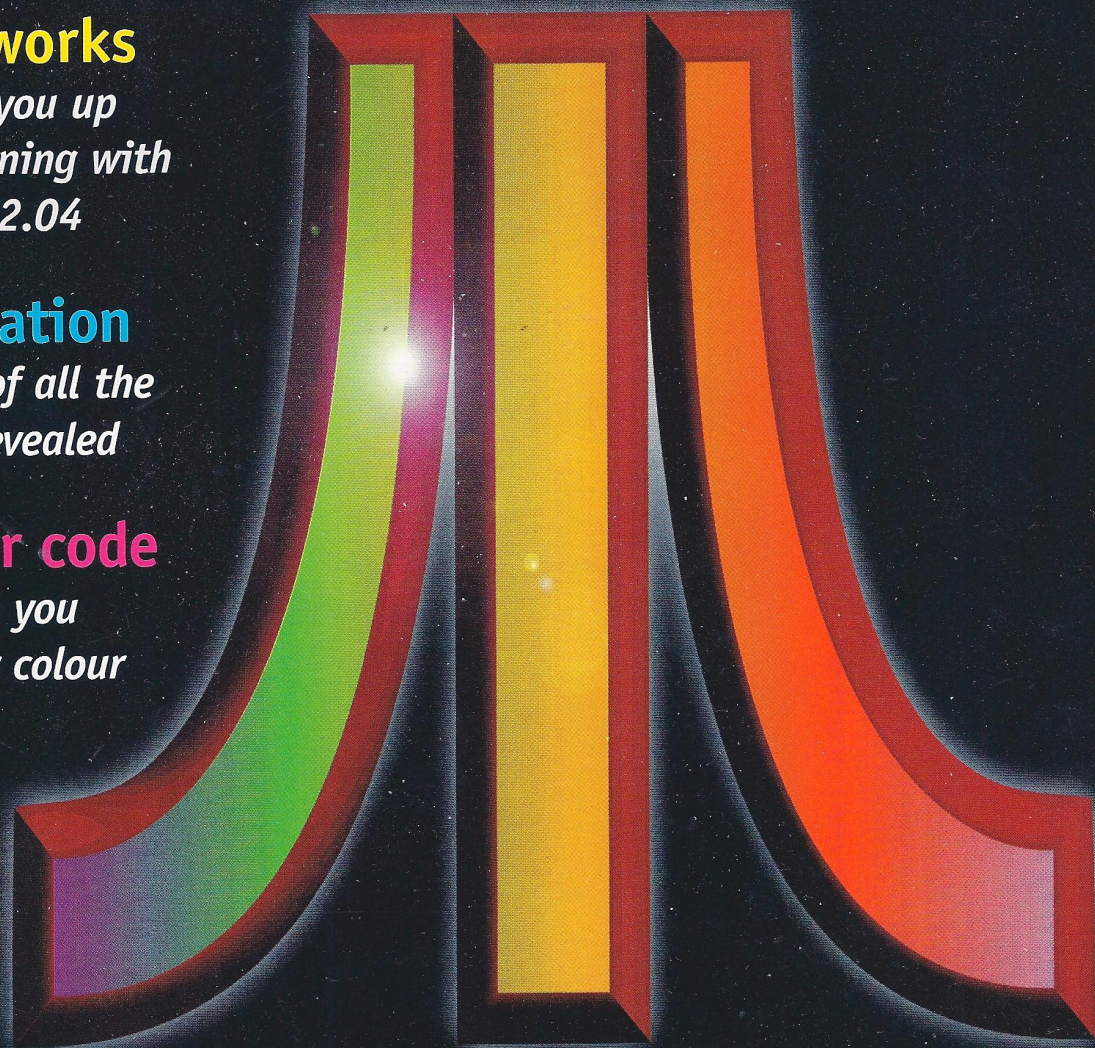
*We get you up
and running with
version 2.04*

Substation

*Part 1 of all the
levels revealed*

Colour code

*We help you
conquer colour*



ATARI WORLD CHRISTMAS SHOWS

IN DECEMBER DON'T MISS OUT!

Reviews

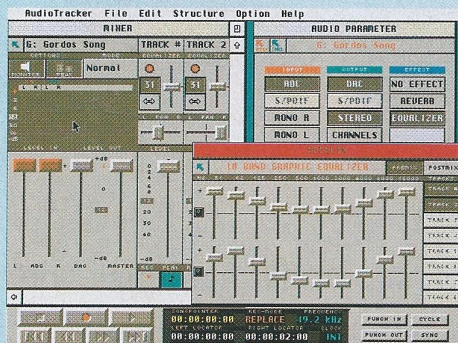
● TOS 2 upgrade ● TUS floppy drive ● Atario CD Master
● Deskjet 600 ● Moonspeeder ● Rayman ● /G/A/S/ ● Linux

A quality exxos scan 01/03/2014

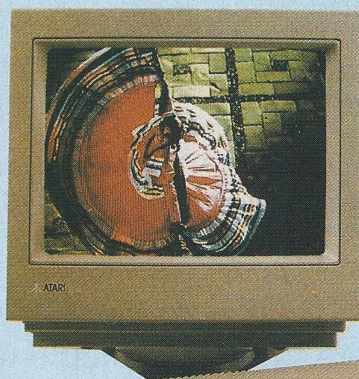
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The Complete Direct to Disk System



Audio Tracker Mixer and Effects Editor



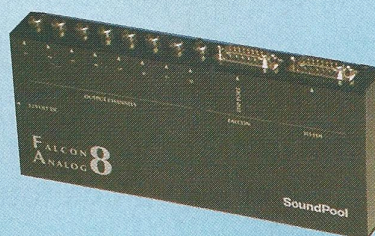
Best Hard Drive 1994



1Gb, 1.7Gb, 4.3Gb
MiniS Hard Drives

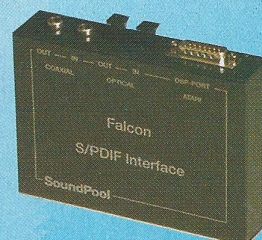


Audio Tracker Wave-form Editor



FA8 ~ Falcon
8 Audio Outputs
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FDI ~ Falcon
Digital Interface
£239 inc. VAT



NEW

Audio Tracker

8 track digital recording for the Falcon 030 with only 4Mb of memory! Audio Tracker uses internal IDE drives, external SCSI drives and is fully FDI and FA8 compatible. The Recorder features MTC and audio sync, punch in/out, pre-roll, locators, song pointers, digital mixdown, sample rate conversion and audio file import/export for AIF and AVR files.

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All this and more for **only £159.00** inc. VAT.

Telephone (0181) 693-3355 to arrange a demonstration, or to discuss any questions you may have.
Ask for your personal quotation. Tailoring systems to your requirements is our speciality.

Designed, colour-separated and photoset using DA's Layout on Atari Computers

NVDI 3



The fastest display accelerator now comes with the Speedo and TrueType scalable font system. NVDI 3 has highly optimised code, faster than the original. Get a faster display, comfortable font handling and faster printing for all programs using GDOS or SpeedoGDOS. Now you can use all those classic TrueType fonts from the PC or Macintosh.

NVDI v3.0 including 8 Speedo fonts £49.95
100 TrueType fonts on disk £39.95
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For update pricing, please phone.

NVDI v2.5 will continue to sell for only £29.95
Best Software Upgrade 1993 & 94 - ST Review.

MagiC



"If you want a multitasking system that works simply and reliably, then MagiC is for you."
ST Review, June 1994.

MagiC is a full TOS replacement; a very fast disk filing system; has accelerated serial, MIDI and printing routines and is, of course, a true pre-emptive multitasking system. MagiC Desk, a replacement Desktop, and a powerful command shell are included. MagiC runs on ST, Mega and TT computers with 512Kb, but 2Mb is recommended for a useful working system. The Falcon version is expected to be available by July 1995.

"It's like running an accelerator and getting the multitasking thrown in for free."

ST User, February 1994

MagiC (RRP £69.95) Intro Price £59.95
MagiC and Ease £79.95
MagiC and Kobold £79.95
MagiC, Ease and Kobold £119.95

NB: Excellent with Calamus SL. Compatible with Notator Logic, but not with Notator SL and not yet compatible with Cubase.

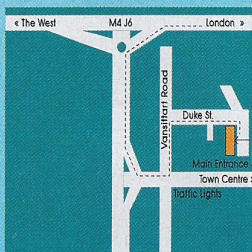
PAK68/3



Turn your computer into a 32bit system with the PAK68/3 and a 68030 processor. The 32MHz clock, 32bit wide TOS and a 32Kbyte cache will accelerate your system by 775% (Gembench 3.10). This is faster than the Falcon and the TT! Clock speeds of 40 and 50Mhz are possible. The use of recycled processors makes this upgrade very affordable without sacrificing reliability. A 32bit 128Mb FastRam board and a 24bit colour graphics card are now available.

PAK68/3 board only, no CPU £249.00
PAK68/3, 33MHz CPU, TOS 2.06 req. £299.00
PAK68/3, 33MHz CPU and TOS 3.06 £359.00
PAK68/3, 33MHz CPU & FPU and TOS3.06 £399.00

Please telephone to discuss your requirements.

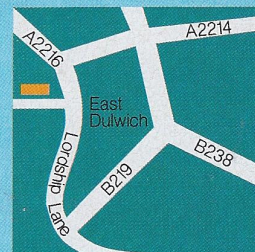


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Kobold



This High Speed File Manager gives unbelievable speed. Copies 1000 files (10Mb) in 45sec (GEMDOS 5:35min!). Use Kobold for backing up; formatting floppies (DD,HD,ED); move, copy and delete files; use the learn function to automate repetitive jobs. Ease calls Kobold automatically for all desktop file and floppy operations.

Kobold 2.5 (RRP £59.95)

ATARI WORLD LAUNCH OFFER
£39.95

Ease



ST FORMAT Awarded 97%

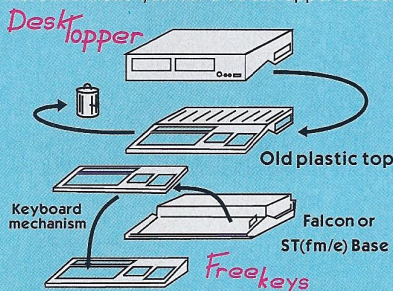
Use your Atari with EASE. Replace the old Atari Desktop. This program could not be more appropriately named. The right click replaces the double click. Iconize windows for instant access to groups of files. Ease is aware of multitasking and comes with a sophisticated Colour Icon Editor. Works on any ST, all TOS versions, and with any display and graphic card.

Ease (RRP £49.95)

ATARI WORLD LAUNCH OFFER
£39.95

DeskTopper

No space for accelerators, TOS boards, hard disks, graphic cards and PC emulators? Convert your Atari into a desktop computer with more space. Simply replace your plastic top with the DeskTopper and fit your keyboard into FreeKeys (or replace with a PC Keyboard using AT-Key). For more information, ask for the DeskTopper leaflet.



DeskTopper - ST(FM/e)/Falcon £69.95
FreeKeys £39.95
DeskTopper and FreeKeys £99.95
AT-Key £49.95
Cherry Keyboard £29.95
DeskTopper & FreeKeys £99.95

T28 & T28e



Tired of waiting for your computer? Then speed it up with a 28Mhz processor. The T28 accelerator is now available for STe and STFM computers. Compatible with Cubase and Notator Logic.

Available Now: The MultiBoard, a TOS2.06 IDE and graphic adaptor with 2-8Mb memory expansion.
T28 - with 64Kb cache for STFM/MegaST £179.00
T28e - with 64Kb cache for STe £199.00
MultiBoard £149.00
24bit Graphics Card £149.00

SCSI Drives



Best Hard Drive 1994 - ST Review Christmas '94
MiniS hard drives are full SCSI systems, hardware compatible with all Atari, Amiga, Mac and PC computers. They are unrivalled in size, low noise, speed and style. The ST(FM/e) version comes with The Translator. Please add £20.00 if you prefer the ICD Link II adaptor. HD Driver will be included FREE (except ICD Link systems).

Gold Award of 93% - ST Format Feb. '94

Essential Buy of 92% - ST Review Christmas '93

★ Quiet fan ★ Internal Power Supply 100-240V
★ 2 Year Warranty ★ Small (2.5x6x8.5") (WxHxD)
★ Dual SCSI Port ★ Device Number Switch

	TT/Falcon	ST(FM/e)
120Mb Quantum	£209.00	£249.00
170Mb Quantum	£239.00	£279.00
270Mb Quantum	£259.00	£299.00
360Mb Quantum	£289.00	£329.00
540Mb Quantum	£339.00	£379.00
730Mb Quantum	£389.00	£429.00
1Gb Micropolis	£599.00	£639.00
1.7GbAV Micropolis	£899.00	
2GbAV Micropolis	£1195.00	
4.3GbAV Micropolis	£1995.00	

CD-Roms



CD Rom drive systems complete with ExtenDOS, for the Falcon with SCSI II Cable, or TT £289.00
for the ST(FM/e) with Translator £339.00

★ Multi-session Drive ★ Photo CD compatible
★ Double Speed ★ No caddies ★ Plays Music CDs
★ Dual SCSI port ★ Headphone socket with Volume control ★ Stereo Phono connectors

ExtenDOS Pro v2 with music CD player £39.95
NEW - Atari Mega Archive, Volume 2, April 95
1.9 Gigabytes of Compressed Data (UK) £24.95
Gemini (Atari PD/Shareware) (US) £24.95
Alpha/Whiteline - PD/Shareware £39.95
Skyline - PD/Shareware £24.95
Bingo - Vol 1 - PD/Shareware £19.95
WOW! - More Shareware, and clip art £19.95
Publisher's Source - Background photos £19.95
Bingo, WOW! and Publishers Source £39.95

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105Mb / 270Mb Cartridge £49.95 / £59.95
128Mb Magneto Optical Drive £699.00
230Mb Magneto Optical Drive £799.00
128Mb / 230Mb MO Cartridge £29.95 / £49.95

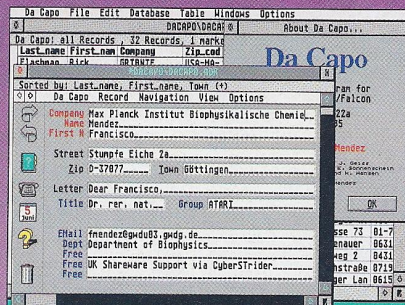
Prices include VAT and may change without notice - UK P&P £3.95 - Multiple or large items, add £10 courier. E&OE

With two service centres and Atari trained engineers at your service, the Atari Workshop is now Atari UK's preferred and recommended service agent. Need it back in a hurry? Ask for our next day ProService. Call us for estimates and to discuss your upgrade requirements. We fit all quality upgrade products. Ask for our Courier collection and delivery.

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ATARI
WORKSHOP

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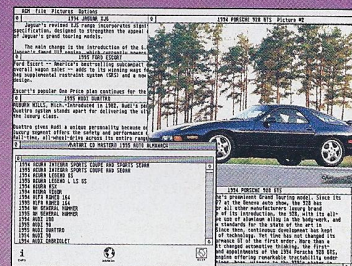
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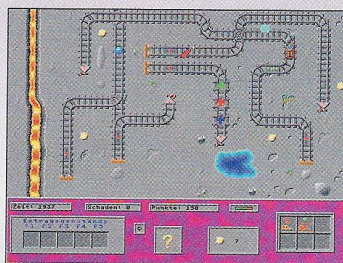
Sonic killer for the Jaguar?

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Well, turn to the page and find out!



Get the Atari World Reader Disk - see page 8 for details



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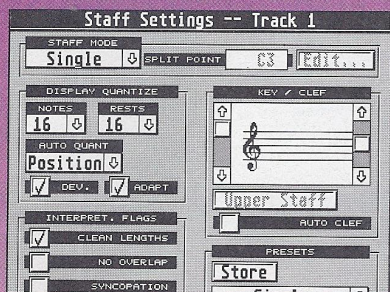
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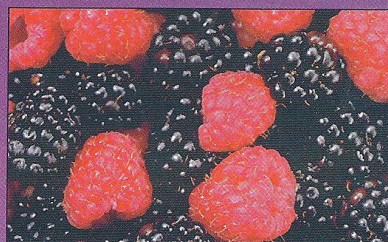
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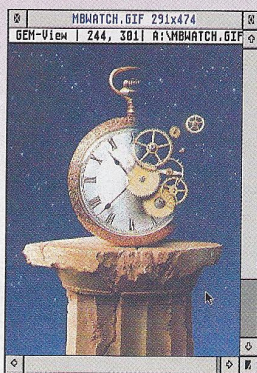
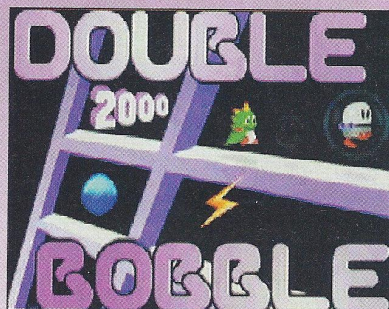
Nial Grimes has some fun (and we even pay him for it).

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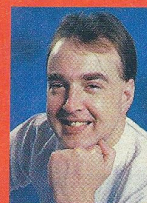
New series.

93 Q & A

Your questions answered by the tech team.



Don't miss the
December issue on
sale Nov 17th



On and On

One thing that struck me this month particularly was the way the Atari scene goes on and on. Many of your letters are so unbe-

lievably enthusiastic about Ataris in general that it's hard to see why the Slough lot pulled out of computer manufacture at all. Many of today's clone makers would give their eye teeth for a dedicated band of punters who live and breathe anything they care to build.

It's a dedication that goes way beyond the call of duty - most power users will cheerfully admit that they can get more done on Macs and PCs. But they don't move across. Why? Simply because they love Ataris.

The other thing that set me thinking this way was the fact that I'm moving house. A weekend spent in the garage among the trunks and trunks full of software has made me realise how steady the Atari has been. Most of the software is just as usable now as it ever was - remember Publishing Partner, First Word Plus, Degas Elite, Steinberg Pro 24? The same can't be said of the PC and Mac stuff. There's plenty of that in the garage too but it's all about three or four versions out of date and won't run on today's operating systems. It's only good for the bin or a car boot sale. Not like the Atari stuff!

Following my appeal on the Internet, I'd like to ask those of you aren't online to think about contributing to *Atari World*. If you think you could write for us, drop me a line - preferably with a sample of 3-500 words - with your name and telephone number.

And lastly, let me apologise for the delay in getting the magazine out recently. We're working on the production problems and hope to have the December issue out bang on target. Fingers crossed.

Oh and one thing I won't be late for is the *Atari World* shows on the weekend of the 9th/10th December. I'll be there, with many of the magazine's writers and I hope you'll be there too.

Andrew Wright

Andrew Wright, Editor

Complete
Communications
with

ATARI Pro

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The theory of colour.

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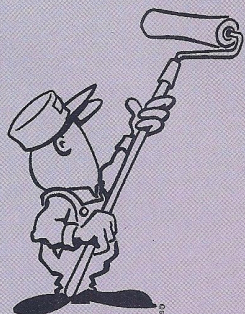
One of the best ST programs ever.

SNIPPETS

B.Bytes Computer Systems and B.Ware Software have recently closed down. The company re-released their back catalogue as shareware a couple of years ago and did moderately well initially. Regrettably, lack of registrations over the past few months has forced them to call it a day. An announcement regarding future registration and support for Super Card 3 will be made soon. Copyright of all other titles has reverted to the authors. Mark Butler and Chris Beale have asked customers not to register Super Card 3 pending the announcement, as the company's bank account has been closed.

Impact Software's Team has been updated for the new football season. All the latest league promotions and relegations have been incorporated along with recent player transfers. Team is available for £24.95 from Impact Software, 12 Bell Lane, Syresham, Northants, NN13 5HP. Existing users can upgrade by returning their original disk to Impact along with the £5 upgrade fee.

System Solutions (0181 693 3355) has announced a new tape backup system. The product name is actually "Falcon" but it works with any Atari. It can hold 2 gigabytes of data uncompressed and roughly 4 gigabytes compressed (depending on the nature of the data). It works with the Gemar and Diamond Back 3 backup software which is, however, not included in price. Streaming speed is around one megabyte a second, which is close to DAT speed backup rates. The cost of the unit, cased in a MiniS together with lead and one tape, is \$579. Extra tapes cost \$29 each.



news



The DirectT30 in towercase with Microsoft Natural keyboard.

New Canadian TT range

Canadian company Computer Direct has announced a new range of Atari computers based on TT motherboards in various different configurations, housed in specially designed tower cases. The DirectT30 range starts at 1499.99 \$CAN for a 16MHz 68030 machine with 2Mb RAM to the top-of-the-range DirectT30 Stealth with 50MHz CPU, 4Mb RAM, 420Mb hard drive, CD ROM drive and optional VGA screen resolutions up to 800 by 600 in 256 colours costing 2799.99 \$CAN.

All the DirectT30 models are built around standard TT motherboards so compatibility shouldn't be a problem though most models are fitted with various accelerator cards and graphics cards to provide higher than normal resolutions.

"These products are aimed at DTP and

graphics professionals already using Atari equipment," said Chris J. Krowchuk, Computer Direct president. "However we're finding that we're selling to new users as well and one recent sale is being set up as an Internet server running Linux."

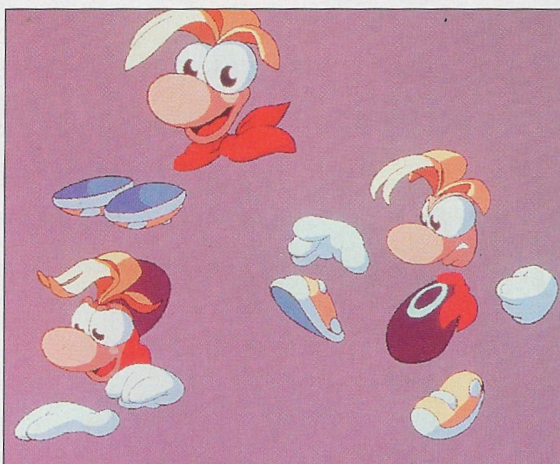
All DirectT30 models are housed in an attractive full size tower case with six 5.25" empty front bays and three 3.5" internal drive bays and are shipped with PC style keyboard, high resolution mouse, TOS 3.06 and a high density floppy disk drive.

For more information contact Computer Direct, 10338-59 Avenue, Edmonton, Alberta, Canada on (403) 496 2488 or 2489 (fax). Email enquiries should be directed to chris@compdirect.com.

Smash Jag Hits?

Atari has lined up a number of game titles it hopes will be smash hits this Christmas but most observers agree its hopes are likely to be pinned on one comic-strip style platform game, Rayman. Dubbed the Jag's Sonic-killer, Rayman features state-of-the-art graphics and we've been lucky enough to get one of the first copies for review in this country. And we don't want to send it back! You can read our review on page 20.

The CD ROM has finally appeared on the streets and to nobody's surprise costs £149.99. The CD provides up to 780 megabytes of raw storage and can hold sound, CD quality music or full motion video. Shipping with the Jaguar CD is Blue Lightning, Vid Grid, the Tempest 2000 soundtrack and a demo version (one level only) of the PC classic Myst. The players themselves also have a Virtual Light Machine built in - this software creates and displays light patterns on screen in response to the music being played on audio CDs. Let's hope the company gets it right this time.



ECTS Showcase

Report by Iain Laskey

The autumn ECTS, showcase for the computer entertainment industry, was once again attended by Atari. Their stand, a mock-up of a castle complete with dark cobwebbed interior was filled to the brim with Jaguars displaying their wares on various monitors. Major titles were running on 41inch projection screens and included 4 new titles as well as Fight for Life, the company's answer to Virtua-Fighter.

Without a doubt, the star of the show was Zero 5. This game has been ported and greatly enhanced from the Falcon title by Caspian. Resembling a kind of virtua-galaxians, Zero 5 features incredibly smooth and fast polygon ships with superbly responsive control. Even the most hardened cynic was impressed with many people comparing it to the best that the Sony Playstation has to offer. Proof indeed that the Jaguar can throw polygons about with the best of them. An excellent pounding soundtrack helped matters along.

Attack of the Mutant Penguins was also gaining a fair amount of interest. A puzzle game in the vein of Lemmings, it features wonderfully humorous animations and some decidedly odd characters. More than one person asked if it was a Jeff Minter game. One to look out for, I suspect.

One area that the Jag is sorely lacking in is football games - happily, Fever Pitch may be just what the doctor ordered. US Gold's new game is nearing completion and almost everyone who tried it ended up needing to be prised off the controller.

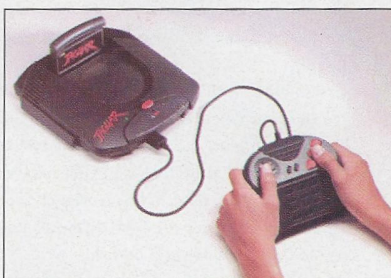
Primal Rage was running on Atari's new CD ROM and looked as good as versions on other platforms. As mentioned, Fight for Life completed the group of high profile games. A popular title was Atari Karts. This game is in the Mario Karts vein and is good fun to play and looks nice with detailed graphics. Highlander was also getting attention. Another CD title, this game is based on the Highlander cartoon series and resembles the Mac/PC classic Alone in the Dark in style.

There were several other games in various stages of

development, some good, some bad, some mediocre though it wouldn't be fair to comment on them in their unfinished state. Suffice to say, Atari still has much to do in improving the quality of some its own titles.

One thing that was all too obvious was that so many Jaguar titles still retain cartoon type graphics more reminiscent of the Super Nintendo than the other super consoles. Gameplay can make up for a lot but it remains to be seen whether the consumer will forgo the state of the art graphics on the newer super consoles? One thing is for sure though, after a shaky start, some decent games are finally starting to appear.

Atari bosses were tight-lipped about the Jaguar's future and wouldn't be drawn on the Jaguar II which is said to be going out to developers this month. What was good to hear (and not from Atari) was that Jaguars are flying off the shelves in Dixons with some shops having trouble getting sufficient stock to meet demand. If the trend continues, Atari should have a very successful Christmas.



SNIPPETS

Atari World can exclusively reveal that Compo Software has acquired UK distribution rights for a new competitively priced Falcon accelerator. The board is built around a 68040 processor with various clock speeds likely to be on offer. Compatibility is likely to be very good, according to an Atari World source in Holland, but the upgrade will require the Falcon to be rehoused in a tower system or System Solutions' Desktopper. Prices could start at around £400 plus the cost of the processor. Compo are on (01487) 773582.



PC Publishing has launched a number of new books for musicians and MIDI users. Titles include "Advanced MIDI User's Guide" by R A Penfold, a 185-page tome costing £10.95. It is aimed at those who have passed beyond beginner stage but still want to get to grips with the more complicated aspects of MIDI.

"Sequencer Secrets" is another new title by Atari World's Ian Waugh and costs £6.95 so if you've enjoyed his sequencing series, why not go for the book? Another title is the £12.95 "Music Technology Reference Book" by Peter Buick and Vic Lennard (that names rings a bell too - Ed). We've been promised review copies so keep an eye out next month. PC Publishing are on (01732) 770893.

Reader Disk

Credit card
order hotline:
01487 773543

A cover disk increases the price of a mag yet many readers never even look at the software! There has to be a better solution – the Reader Disk...

The optional Reader Disk directly supports the software covered in the magazine and creates a link between the reader and the software author. Atari World supports and encourages authors – in return you can do your bit by supporting them. The Atari World team is in constant contact with the best Atari programmers around – we keep your finger on the pulse and obtain the very latest versions, often exclusive to Atari World!

This issue there is one disk and the cost is £3.50 inclusive of post and packing. Don't forget that subscribers get all additional disks absolutely free! Check out the special subscriber deals on pages 40-41.

What's on the disk?

Marcel v2.3

Special Edition • Marcel Software

This ex-commercial word processor offers all the features you'd expect to find plus Rich Text Format (RTF) support. RTF preserves font and style details when exchanging files with other RTF aware applications.

Kandinsky v2.02

Special Edition • Shareware • Ulrich Rossgoderer

Kandinsky is a state of the art vector graphics package. It's the perfect application to create and edit GEM metafiles for use in Timeworks, Calamus and the like. To save and print drawings you'll need a working GDOS setup which includes META.SYS - the one included with Timeworks is fine.

Dirsort v1.1

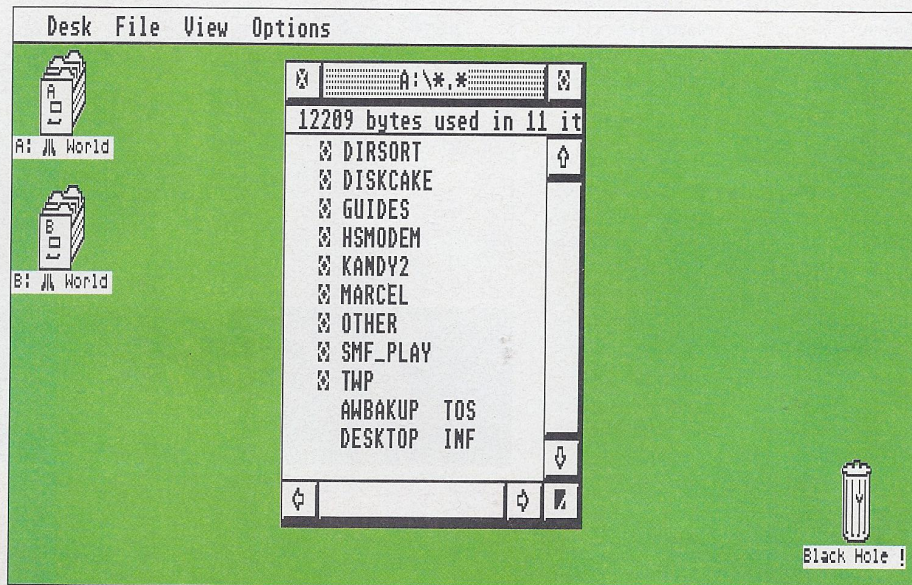
Freeware • Christoph Zwerschke

The running order of Auto folder programs is crucial. Changing the running order manually is tedious but using Dirsort it's a simple Drag&Drop operation.

SMF-Player

Fairware • Peter Bogner

Standard MIDI File Player can handle type 0 and 1 MIDI file formats and filter MIDI messages such as Program Change, Pitch Bend, SysEx, and Pressure.



TWP

Shareware • Robert Best

TWP is a small utility capable of converting documents between That's Write and WordPerfect format in either direction. Currently TWP is the only utility we're aware of which can intelligently convert That's Write documents to a different application without reverting to ASCII.

HS-Modem v6

Special Edition • Freeware • Harun Scheutzw

All TOS versions have buggy serial port routines. HS-Modem replaces the buggy routines with optimised routines which maximise data transfer rates. The article 'Softly does it' on pages 63-4 in Issue 6 explains how to set HS-Modem up.

Disk Cake v2.1

Freeware • Christoph Zwerschke

Having trouble visualising where all your disk space went? Fire up Disk Cake and turn your directory listing into an interactive pie chart. It's easy to spot the space wasters and even delete them using the built-in delete function.

Atari World Profile

Exclusive • Joe Connor

Database for issue five in ST-Guide format. The database now covers the first five issues. To maintain your database you may prefer to create a separate database disk which can easily be extended each month:

Use AWBAKUP.TOS to make a copy of the Reader Disk.

On the copy delete everything apart from the GUIDES folder.

Each month copy the contents of the latest Reader Disk GUIDES folder to the GUIDES folder on your database disk – some files will be overwritten each month, this is normal.

Optionally add a copy of ST-GUIDE.ACC and ST-GUIDE.INF to create a stand alone database boot disk.

As usual everything on this month's Reader Disks are covered inside the magazine. To make it easy to back up your Reader Disks a copy of AWBAKUP.TOS, specially programmed by Ofir Gal, is included each month. Simply run AWBAKUP.TOS and follow the on-screen instructions; the program even formats the disk for you. We recommend you always store your original disks in a safe place and don't use AWBAKUP.TOS for any other purpose.

Reader Disk problems

In the unlikely event that a Reader Disk won't load or gives you any other problems, disconnect all peripherals, switch off your computer for at least 20 seconds and try again. If this doesn't solve the problem, return the disk to the Atari World Disk Sales address clearly labelled Atari World faulty disk and enclose a self addressed envelope. Your disk will be tested and replaced or returned as quickly as possible.

Should you require technical help, call the Atari World Disk helpline on Wednesday evening between 7pm and 9.30pm on (01206) 852602 or leave a message on the answer phone outside these hours.

SEE PAGES 40-41 FOR ORDERING INFORMATION AND BACK ISSUES

Quality and Service

At Floppyshop we only stock the very best software. All our ST disks are double sided and are crammed full. Our Falcon disks are mostly HD and are full where possible. In addition, our catalogue disks are the most detailed in the UK and cost just £1.00. Please state ST or Falcon. Same day despatch on orders. Creditcard orders are welcome (minimum value £2.00). Unless otherwise stated, all disks cost £2.00 each and run on standard machine with 512k of memory (1 Mb if it's a Falcon) upwards. COLOUR OR MONO Disk numbers ending 'C' i.e. GAM.10C are for COLOUR MONITORS OR TV'S ONLY. Disk numbers ending 'M' e.g. ART63M are for MONO MONITORS ONLY. RGB or VGA Indicates the monitor type required for a specific Falcon program.

ART & GRAPHICS

ART.4930C THE SPRITES PORTFOLIO V2 - A collection of over 600 sprites (in Degas format) for use in your own games. Top quality artwork ideally suited to enhancing even the most basic of home grown games. ART.4941 SPRITE MASTER - Sprite designer package, outputs source code which can be easily incorporated into most programming languages. SPLASH - An easy to use art package specifically geared towards children aged 3-10 years. ART.5276 PICFIB V1.1 - A useful slideshow which lets you tag images into groups for displaying. Very useful if you need to check through lots of clip art. THE FRACTAL ENGINE V2.1 - Simply the best fractals program around. Supports 3D landscapes, plasma clouds, mountains and fractal animations as well as more traditional subject matter.

CLIP ART FOR DTP

CLIP.114, CLIP.115, CLIP.116, CLIP.3494 A collection of over 700 high quality images in GEM vector format. Resize as big as you want with no loss of quality. Only £2.00 per disk!
S-CLIP5281, S-CLIP5282 & S-CLIP5283 A collection of over 60, 400 dpi images of Gods and Dieties in IMG format. Three disk set, £5.25 for set.
S-CLIP5284, S-CLIP5285, S-CLIP5286 & S-CLIP5287 Almost 80, 400 dpi images from the theatre in IMG format. Four disk set, £7.00 for set.

We also have hundreds of disks of quality MONO IMG clip art, all from £2 per disk or less! Order our catalogue at £1.00 for full details.

EDUCATIONAL

EDU.41 GCSE REVISION - Covers Algebra, Geometry and Trigonometry and conforms to grades A, B & C of the GCSE syllabus. Written by a mathematics tutor.

EDU.5237C MAGIC SPELLER 95 - A fun program which teaches the fundamentals of spelling to young children. It allows the child to progress at his/her own pace and parents can edit the word lists used.

EDU.5264C MEMORY RECALL - A variation on other memory games where you match up pairs of symbols hidden on a grid. This one uses single items which must be located in the order requested. Five difficulty levels, great graphics, digitised speech. Addictive fun for ages 8 to 80! Needs 1 Mb.

FONTS

FNT.3185, FNT.3186, FNT.3187, FNT.3188, FNT.3331, FNT.3332 - 102 PostScript Type 1 fonts for use with PageStream, SpeedoGDOS 5 etc. £2.00 per disk.

FNT.5193, FNT.5194, FNT.5195 - 90 True Type fonts for use with NVDI 3 or SpeedoGDOS 5. £2.00 per disk.

We have over fifty more disks full of Signum, Calamus, Type 1, True Type and Degas fonts. Check out full catalogue for full listing.

MIDI & MUSIC

MID.3671 CLASSICAL MUSIC - 42 classical pieces in MIDI format. Includes pieces by Bach, Beethoven, Chopin, Handel, Mozart & Tchaikovsky. MUS.4693 QPLAY - A Quartet song player which outputs to monitor or ST Replay cartridge at frequencies of up to 22 khz. Also on disk is a player program for Mad Max chip music and 90 pieces of music to listen to.

MID.5272M TAKE 500 - An impressive editor for the Yamaha TG500. Includes over 100 drum fills in various styles.

MUS.5256 OPTRONIX MUSAK PLAYER v2 - Chip music, Quartet & Tracker file player. Handles more music types than anything else! Complete with hundreds of chip music files on disk.

PROGRAMMING

LAN.3545 GFA EXPERT - Includes Your Second GFA Basic Manual, a 122 page text file full of hints and tip on how to get the most out of GFA Basic. It covers many features of GFA Basic which are not even mentioned in the manual. Also included is lots of useful source code for use in your own programs. LAN.4943 ST-68K REFERENCE V3 - A complete guide to the internals of the ST. It covers everything that assembly language programmers need to know, including all BIOS, XBIOS, GEMDOS, AES, VDI & LINE A calls. There's also plenty of information on the hardware, including the 68000, 68901, 6850 & YM2149. Held together in an easy to use shell, with cross referencing. LAN.5295 PNG - The full C sources and documentation for the Portable Network Graphic format, Compuserve's replacement to GIF89. THE MINT PROGRAMMERS GUIDE - A comprehensive hypertext guide to programming MINT/Multi-TOS friendly programs.

LAN.5298 STOS PROGRAMMERS DISK - Includes the Blitter extension, Ninja Tracker (play MOD files under interrupt) extension, a bootstrap selector for STOS extensions and lots more.

UTILITIES

We have thousands of utility programs spread over several hundred disks. A full description of every program is given in our catalogue.

UTL.4143 AWARD MAKER PLUS - Design your own certificates! Over 250 designs on disk which can be adapted to suit.

S-UTL.4491, S-UTL.4492 & S-UTL.4493 THE SUPERCARD 3 BIBLE COLLECTION - Complete texts of the Old and New Testaments in Supercard format, along with a copy of Supercard 3. Three disk set £5.25 for set.

UTL.4657 XLIATOR V2.04 - An excellent foreign language translation program with a 27,000 word German to English dictionary. Also includes a small French to English dictionary. Full registered version. Needs 1 Meg

UTL.5102 THING V0.54 - One of the most fully featured replacement Desktops around. Has all the best features of TOS 2+ and a few extras from System 7, Windows 95 and NeoDesk 4. Needs TOS 1.4 or better.

S-UTL.5224C & S-UTL.5225C NATIONAL LOTTERY SIMULATOR - Your very own lottery machine! An atmospheric build up to the draw, watch the balls roll out, just like they do on TV. A real fun way to pick your lucky numbers, complete with voice-overs and music. STE ONLY, needs 1 Mb. UTL.5265 ARCVS V1.00 - A font manager program for use with SpeedoGDOS, NVDI 3 and Calamus. BATEFAX - A Shareware fax program. TOMS v2.0 - Great document display with full GEM menuing system. Ideal for on-line manuals or cataloguing your own disks.

UTL.5291 FLOWCHART COMPILER - Create your own presentation flow charts. APPLIER - Allows up to 8 different applications to be called by each specified extension using the Install Application function. CHAIN ST - Set up several GEM programs to autolock with TOS 1.4 or later. STOSSER MULTI-MEDIA DISPLAYER - A doc displayer which allows graphics, animation and sound to be incorporated into text documents! TTF VIEW - Display True Type fonts without having to load SpeedoGDOS 5 or NVDI 3. iPRN - Speed up printer output to any printer.

WRD.5299 UK ADVANCED CRYPTICS DICTIONARY - A massive 190,000 word listing of words commonly used in cryptic crosswords.

OTHER PRODUCTS AVAILABLE

DegasArt Parts 1, 2 & 3

The highly acclaimed three disk graphics tutorial package has been upgraded to v3. Well written, easy to follow tutorials combined with 120 quality illustrations giving you a step by step guide to creating your own masterpieces on your ST. As well as delving into every significant feature of Degas Elite, DegasArt takes you through the basics of reproducing artwork on a computer and guides you through the 'tricks of the trade'. As most of the tutorials discuss general graphic techniques, these can be equally well put into practice with EZ Art Professional, True Paint, Pixart, Canvas, Deluxe Paint, Flair Paint, Cyber Paint or indeed any other ST graphics package, including the vast range of titles available in the Public Domain. If you want to learn to draw and paint on your ST (or improve your existing skills), DegasArt 3 simply cannot be beaten. DegasArt 1, 2 & 3 come together as a three disk set for the incredibly low price of just £12.00 + P&P (UK free, Europe £1.50, rest of world £3.00). Existing users of DegasArt parts 1 & 2 can order part 3 on its own for just £5.00 + P&P (UK free, Europe £1.00, rest of world £2.00).

Easy Stitch

Easy Stitch is a cross stitch pattern generator. It allows you to convert graphic files into cross stitch patterns or create your own on a grid on screen. This computer based variation stands head and shoulders above the traditional graph paper method as it allows blocks of stitches to be copied, rotated, enlarged or reduced to suit. In fact you can even edit the individual stitches. Patterns up to 10 feet by 8 feet can be created easily on your ST and printout is supported to most common dot matrix and laser printer types. Easy Stitch is the leader in its field, being the only cross stitch package to support the creation of the more complicated back stitch and half stitch. An ideal Christmas present, especially at the low price of just £19.95 + P&P (UK free, Europe £1.50, rest of world £3.00).

Easy Text Pro Vector

At last, quality Desktop Publishing is within everyone's grasp with the highly polished, yet budget priced Easy Text Pro Vector. Create your own leaflets, brochures, newsletters and business stationery easily with this well documented, easy to use package. This version makes full use of the increased flexibility offered by SpeedoGDOS and NVDI 3, giving crisp, clear output on all types of printers. Now available at the 'ally' price of just £19.95 + P&P (UK free, Europe £2.00, rest of world £5.00). Can you really afford to be without this product? Easy Text Pro Vector needs 2 Mb of memory and a hard drive or 2.5 Mb if you don't have a hard drive. SpeedoGDOS 4 (or later) or NVDI 3 are also required.

Easy Text Pro

This is Easy Text Pro Vector's 'little brother' with most of the functionality of Pro Vector but tailor made for users who do not have SpeedoGDOS or NVDI 3, and are short of memory. It runs on a basic 1 Mb ST and does not require a hard drive (although we do recommend that you have one). Easy Text Pro is also available for just £19.95 + P&P (UK free, Europe £2.00, rest of world £5.00).

OMEn Multi-Tasking Operating System

Designed as a cross-platform operating system, programs written for OMEn on the Atari will run without modification on a PC, Mac or Amiga running OMEn. OMEn completely replaces TOS and GEM, providing fast, compact (in terms of memory usage) true pre-emptive multi-tasking OS. This full version offers lots of extras over the Shareware version and is only available from Floppyshop in the UK. The OMEn operating system costs £20.00 + P&P (UK free, Europe £2.00, rest of world £4.00).

Please note that OMEn does not run TOS or GEM programs directly, although their source code is easily adapted if you have the OMEn Developers Kit.

OMEn Developers Kit

The full developers' kit including the massive programmers' reference guide on disk. The two disk package includes an assembler, disassembler/debugger, and a C startup and interface library (you can create your code in any ST C compiler). The OMEn Developers Kit has deliberately been priced low, so as to bring aspiring new programmers into the fold. It costs £12.00 + P&P (UK free, Europe £2.00, rest of world £4.00).

EZ-Art Professional v1

This is a well documented, easy to use graphics package which is simply crammed with features. Over 20 different types of shapes are supported and over 20 different effects can be applied to blocks. EZ-Art Pro is STE enhanced, making full use of the extended colour palette. There's a built-in colour fill designer, support for up to ten workscreens and almost 20 drawing tools and modes. What's more, the package runs on a 520! Ratings: ST Review 90%, ST Format 83% and voted Graphics Package of 1994 by ST Review readers. Now available for just £19.95 + P&P (UK free, Europe £3.00, rest of world £5.00).

FALCON 030 SECTION

We were the first to support the Falcon and now have almost 600 HD disks in our library. The Falcon catalogue costs just £1. Falcon disks cost £2.00 each unless otherwise stated. Please note that the disks in this section will NOT run on an ST or STE.

ART & GRAPHICS

F4869 ECLIPSE - Image processing package with lots of filters and the ability to map images onto 3D objects. FRACTALS - Two fractal generators which use the DSP and FPU (if fitted) for speed. JPEG - Various programs to compress, decompress, view JPGs. MPEG - Two players for MPEG animations. SCAPE - Creates random planetary landscapes. INDY PAINT 1.5 - True Colour art package.

F5277 GVMOD030 - External image processing modules for GEM-View 3.x.x. IMCON - Converts between graphic file formats. MOV-POV - POV shell which supports animations. VIRTUAL SCREEN IMG VIEWER - Scroll around outside IMGs. SPOOKY - True Colour sprite designer. RGB ONLY. Needs 4 Mb. PICFIB - Slideshow which allows tagging of images to specify which ones will be displayed.

COMMUNICATIONS

F4454 CONNECT - GEM based comms package which implements all popular terminal emulations and file transfer protocols. Works on all communications ports (Modem 1 & 2, Serial 1 & 2, MIDI & LAN). BBS DIRECTORY - A map of the UK with various options for locating Atari based bulletin boards. GSZRZ - An implementation of SZ and RZ protocols for use with Zmodem file transfers.

F5292 STARCALL - A combined terminal emulator, bulletin board and fax modem package. OASIS - Everything you need to get connected to the Internet. SET DEV 7 - Sets device 7 as the default modem port. XYZ MODEM 2 - Patched version of XYZ Modem for the Falcon.

FONTS

F3974, F3975 & F3976 POSTSCRIPT TYPE 1 FONTS - A collection of 103 fonts for use with PageStream or SpeedoGDOS 5, spread over three disks. £2.00 per disk.

F5208, F5209, F5210, F5211, F5212 TRUE TYPE FONTS - A collection of 199 fonts for use with SpeedoGDOS v5 or NVDI 3, spread over six disks. £2.00 per disk.

We have hundreds more fonts in Calamus, Signum and Type 1 format on HD disks. Full details on the catalogue disk.

GAMES

F4791 DYNABUSTERS + - Wander around the maze dropping bombs onto blow up walls and your opponents, but beware you don't get caught in the blast! For 1 - 6 players. WYRD WAYS - Your combat arena is a maze. You move sections of the maze as well as your character as you strive to defeat your opponents. For 1 - 4 players. MINDMELT - Travel around the land in this RPG looking for unique individuals to mindmelt with in order to acquire their skills.

F5153 TETRHEX - Tetris inspired game played with hexagons instead of blocks. Frustratingly addictive. ULTIMATE ARENA - Play three rounds against tough opponents in this playable demo of the best karate game ever written. SKYDUEL - Air and land combat game for up to 3 players.

F5306 TAUTOLOGY II - An impressive variant of the Chinese tile game where you remove matching pairs of tiles. Includes multiple levels and two player option. Needs 4 Mb. DOUBLE BOBBLE 2000 - An addictive game where you fight your way through 100 levels, killing monsters. Includes two player option. Needs 4 Mb.

MUSIC

F5303 SWEET 16 LITE - Cut down version of a 16 track pattern based MIDI sequencer. EKED-M1 - An editor/librarian for the Korg M1/MIR. GEMIREC - Two track direct to disk recording program. MUSIC ANALYZER - Monitors an incoming signal, displaying real-time data for each channel. SMF PLAY - Player program for MIDI files. ST2MIDI - Converts chip music into MIDI data. TIME IS MONEY - Converts between tempo and note values, expressed as units of time.

PROGRAMMING

F4218 NEW TREND DSP SOURCES - Over 200 DSP56001 source code examples.

F4574 GRAPHIC LIBRARY FOR C BEGINNERS - A library of modules for use in your own C programs. Concentrates mainly on graphics, sprites, mouse/keyboard events, file access, double buffered animation and digitised sounds.

F5152 SOZOBON X - An eXtended, bug fixed and improved version of the Alycon C compiler, Sozobon C v2. Supports profiling, pre-compiling and has built-in source level debugger and optimiser. Includes improved versions of DLIBS & GEMFAST and a graphic based front end. Extensive docs and on-line ST-Guide help.

F5307 STOS BASIC FALCON EXTENSIONS - Collection of extensions which allow STOS BASIC to make use of the Falcon's improved hardware. Play MODs, display 256 colour pictures, switch on/off cache, run STOS from Falcon resolutions, play stereo sound samples, use virtual screen resolutions and much more.

UTILITIES

F4862 FLOPPYSHOP CPX COLLECTION - 75 CPX modules for use with Atari's eXtensible Control Panel, Xcontrol (also on disk).

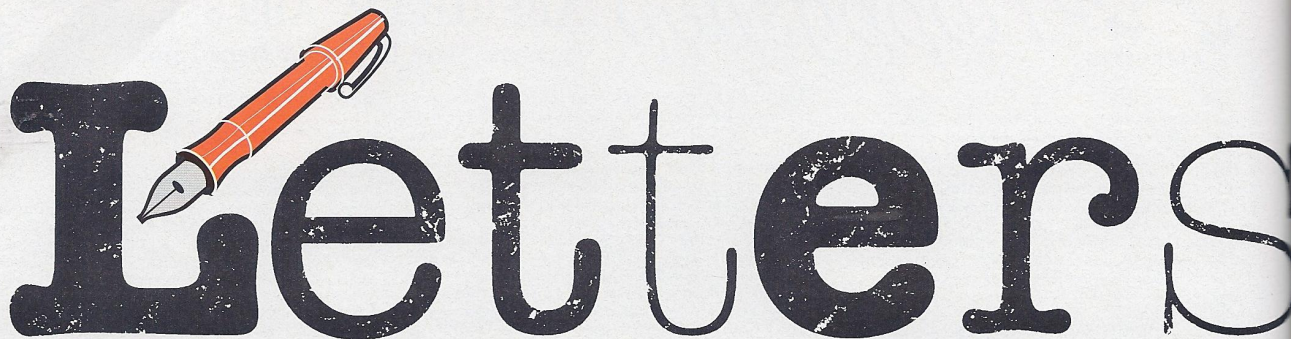
F4863 HEWLETT PACKARD SUPPORT DISK - Everything you'll ever need for your Hewlett Packard Deskjet or Laserjet printer.

F5018 RUFTRADE 2 - The very best German to English translator. ROUTE FINDER 2.1 - An electronic route map of Britain. Also on disk DESKINE, DUET, PROFILE 2, RECIPE BOX 4.5, ISHAR CHARACTER EDITOR.

F5293 ACCELERATE - Boost your CPU to 36Mhz and your FPU to 50 Mhz with this DIY electronics project. Also on disk are AVEM, MANUALIZER, TTF VIEW, PYSGHAM, SVGA EMULATOR, TOSGEM, LET 'EM FLY 1.3, CHAMELEON CUSTOMISER, LEXICON, CLAC, CEADPE, INSCHAR, INSDATE.

F5294 1ST DIR, BROWSER, CHAIN, COOKIE MONSTER, CRYPTAR, F030CLPT (hardware mod to fix audio & SCSI problems), iPRN (printer accelerator), ICON EDIT, REDACTEUR, TO RTE, MAKE FONT LIST, MEMSPEED, SET CLIPBOARD, WORLD SAT (Satellite disk aiming calculator).

PAYMENT DETAILS: All prices include postage in the UK. Overseas orders welcome. Please add £1 per order for Europe and 10% of order value (£2 minimum) Rest of World. Overseas customers please note - We can only accept payment by credit card or in UK currency (cheque drawn on a British bank is recommended). Cheques should be made out to FLOPPYSHOP



Letters

Jag mag

First of all I'd like to welcome you to the editorship of the only real Atari magazine and to say a farewell to Vic Lennard, a good editor with a bad haircut. I think, I can say that he was one of the best editors of any magazine I've ever read.

And now for something completely different as they say. What happened to the Jaguar Update column? With it gone the only source of Jaguar news is to be found in the gaming magazines, which don't exactly go out of their way to give good news about the machine. I know you could say that as this is an Atari magazine you should only concentrate on Atari issues, then again they don't call it the Atari Jaguar for nothing, but I feel it should have about a page devoted to it every issue. If you can't feel you can have a Jaguar specific section within the magazine, maybe a collaboration with a bigger publisher, or even Atari UK itself could be made to produce a Jaguar magazine itself. I'd even write a column for the machine if you give me the numbers of some people to contact.

Sorry for ranting on about the Jaguar so much, but I feel such a great machine deserves better support from the industry than it is getting at the moment.

Edward Phillips, Bath

Thank you and yes, he was a good editor. In fact he still is a good editor - he just doesn't edit an Atari mag!

The Jaguar update column is still alive in spirit - we just haven't decided about its future format. By now you must have read issue 5 and seen the amount of coverage we gave the Jag. Since then very little has happened in terms of real releases that we can get our hands on. If you think the word "real" is strange, let me explain that there are releases that exist only on Atari headed press release paper and releases that you can actually plug

Right to reply
Put pen to paper and speak
your mind in *Atari World's*
letter pages...

into your Jag and play. I'll give you a clue as to which one we prefer to review.

The last thing I want to do is devote a whole page or two to a subject which is highly seasonal and where we might have two or three months with no news. When there is real Jaguar news or stories, rest assured we will cover it. We'll also make decisions about the games as and when they become available - I've got a Jag and I want my hands on 'em too you know!

No World!

Yes I am going to subscribe! And why? Because today was the last straw. I went into W. H. Smith, Churchill Square, Brighton to look for *Atari World*. It was nowhere to be seen amongst a sea of PC and Mac titles. In the end, I asked an assistant who produced it from a delivery box which had, according to her, arrived this morning and had yet to be emptied.

She also told me that this was the last month in which they would have ST magazines on their shelves: I was not pleased. The decision has apparently been taken at branch level and I think it is deplorable. Being told that one could still order the magazine was no consolation. Sussex is a backwater as far as Ataris are concerned, and yet I know they are around. I use mine for serious music making as Vic Lennard and Ofir Gal know: I am a member of Club Basique.

For what it's worth, I thought I

ought to write to you about this. With best wishes for *Atari World*, which gets better every month.

PS Do I get a calculator?

Sydney Vale, Hove

I think the decision is deplorable too but unfortunately Smith's aren't a public utility - they're a money-making concern and they have to make the business decisions that are best for them. Tragic as it is for Atari enthusiasts, we've got to live with it.

The only thing that does puzzle me is that so many people think subscribing is the last resort, the bottom of the barrel, and something to be avoided at all costs. A reader rang me up the other day saying he'd driven over half of central Scotland and couldn't find the mag anywhere. When I put it to him that he could have saved an awful lot of petrol by subscribing - or just ordering a single issue via the hotline - he thought I was daft!

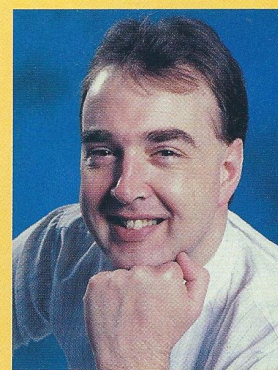
I'll be blunt here - we see much more of the money from the sale of the magazine when you subscribe than we do when you buy in a newsagent. That's why we like to encourage subscribers. Not so that we can all drive around in Rollers and retire at 40 as millionaires, I might add, but so we can be continue to provide the service we do. It's a free country though and you do have a choice.

And yes you can have a calculator - so that you can work out what you save by subscribing!

Ideas, ideas

I am writing with some comments on the latest editions of *Atari World*. I was very pleased to see some Jaguar reviews at last. I have Doom and think your review is very accurate. I also seem to get terrible motion sickness after playing for any length of time. I also bought Theme Park, but returned it after finding out about the poor game save. I wrote to Atari complaining that they had licensed it - they replied with a scribbled note saying they had no involvement in the development of the product. I then wrote to Ocean complaining, and they apologised and said "You must take up this particular gripe with Atari because they dealt with all the packaging due to time restraints". Good old Atari, what more proof do we need that they have no idea what they are doing?

The readers disks are OK, but could you possibly put a small game



Write On...

Got something to say? Even if you're just sick of looking at my face, write to me at Atari World, either at the address on page 98 or via e-mail to andwright@cix.compulink.co.uk.

on one of the disks to give a greater mix. Maybe you could put some text files from the Internet on the Reader Disk (copyright permitting) and possibly including the text file in ST Guide format.

Could you possibly give greater support to STOS? A page with some STOS advice or tutorials would be welcome. Could you possibly do a round up of all the best STOS extensions and accessories and put them on a special Reader Disk? Maybe you could buy the rights to the commercial sprites disks and games listings.

Since Atari World is a new magazine and maybe did not sign the agreement not to publish full price games, could this be a possibility in the future? Maybe some older game which is no longer available. Since Atari World is not limited in the number of disks it uses, could you possibly put larger PD/shareware programs on it which take up a whole disk?

Thank you for your time, and I look forward to seeing a steadily improving excellent Atari magazine.

James Marson

PS Could you possibly do a brief round-up of the Lynx titles available very cheaply from Special Reserve and Telegames. Also Atari Entertainment magazine said Atari were releasing some new Lynx titles, is this true, and is a review a possibility?

I'm not sure I follow you as regards Theme Park. If Ocean developed the product and Atari only did the packaging, then the poor game save is Ocean's fault, not Atari's. For once, it's not proof of Atari's incompetence.

Games on the Reader Disk? Good idea I guess. I'll have a chat with our Reader Disk editor. But be warned - he's a true Atari anorak from the old school and he hates games players. He's even rumoured to eat them for breakfast. If only everyone could be as happy and cheerful as me...

Text files from the Internet? Sounds a good idea but what subject would you like them on? Goldfish breeding? Micaceous deep sea sediments? I suppose you mean Atari related files but we already cover most of the subjects you're likely to want - and the articles we provide are properly written and edited. That's one of the reasons why there are already dozens of Internet magazines in the

newsagents - people find it a lot easier - and more informative - to read well-produced, well-written articles in print.

There's so much stuff out there that you'd be far better advised to get a modem and get out there yourself - that way you can find what you want.

More support for STOS is a good idea. We've had a steady stream of letters asking for more STOS material and we'll be doing our level best to give it to you. I'm still looking for someone who can write and who knows about STOS - if there's such a person out there, please get in touch.

I don't know much about the games agreement - something to do with ELSPA I believe - but I do know that I've no intention of doing something that would damage the software industry simply because we're a new title. On the other hand, there aren't as many Atari publishers around these days so why not? I'll investigate.

Funnily enough I've been planning a Lynx feature for some time now. Over to you, Niall Grimes...

Programming please!

How about completing the Prospero C Package that came with ST Review issue 17? I, and I am sure many others, would be very grateful, especially, if like me, they bought the manuals. And as a further suggestion for reader disks, what about GFA BASIC & Compiler v3.5? Will you be providing a service where previous reader disks are made available on a long or short term basis?

Having had Ataris since 1985 (I still have 3 8-bit machines) I was pleased to see you including articles on them. As you probably know, Page 6 Publishing's New Atari User magazine seems to be nearing the end of its life. The editor, Les Ellingham has given many thousands of Atari users all they needed to get started in home computing. Two or three pages of "Page 6" starting on page 6 in Atari World seems a nice idea (bearing in mind the nature of that 256 byte area of the 8-bit's RAM). Your mag would then, definitely, be the one for all Atari users.

**Malcolm Lawrence, Newcastle
Emlyn**

Back to basics?

Thanks for the suggestion. However we want to move forward, not backwards. To be honest I can't even remember issue 17 of ST Review - it must have been some time ago!

Anyway, for the benefit of the programmers out there, next issue sees the start of a new series on BASIC programming, linked to a superb giveaway that should be of interest to a lot of would-be programmers.

I'm not sure what we should be doing about the old 8-bit Ataris. Personally I've never had anything to do with them - I came from ZX81 through the Spectrum 48K and Amstrad CPC464 before I got my first Atari ST. Not that that means I'm going to ignore them if the readership wants them, of course. You're the bosses!

My thoughts tend towards only including occasional articles though - the Jaguar is alive and kicking (at least it will be until the next generation of consoles appear) and I've already mentioned the Lynx but the old 8-bits are definitely out of fashion. On the other hand, our new STranded slot - a sort of desert island disks type series - has plenty of room for some of the old 8-bit enthusiasts to come out of the closet and tell us why they'd leave their STs and take the old kit. Any offers?

Cover up

I'm writing to congratulate you on a brilliant front cover for Issue 6. It's the best I've ever seen - on any magazine anywhere! Who thought that up? How does the cover get designed anyway? I think the little

men are great and I've spent hours just looking at the front cover, spotting all the things they're doing. Let's have another one like this soon!

Marty Fellows, York

Thanks very much, Marty.

Actually we've had dozens of letters (and even some email messages) about the issue 6 cover. It was an inspired idea in my opinion and one I can quite happily say I had absolutely nothing to do with, other than writing the text. Incidentally if you noticed, there was a typo on the cover - that was pointed out by "Darren from the Internet" who was getting his revenge for my comments in last month's letters page!

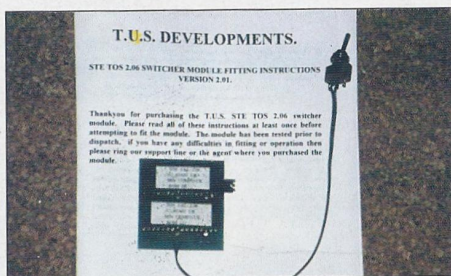
The design and execution of the cover was down to a Ken Sims, the art editor, ably assisted by our publisher Neal O'mions who likes to stick his nose in occasionally just so he feels he's getting his money's worth. On this occasion we're all glad he did! You have to feel sorry for Ken on this one though - he now knows he's got to live up to the same high standards every month!

As for how we get our cover ideas, it's much the same as any other magazine. We look at the list of features and reviews we've got lined up and see if there's a common cover theme that ties them all together. More often than not there isn't but we toss the ideas around anyway. The issue 5 cover was done on a "summer fun" theme so the surfing picture worked quite well in my opinion. I liked it anyway! The only trouble is I've got no idea what we'll do for issue 8 - BASIC is hardly great material for visual experimentation is it?



TOS 2 GO

Denesh Bhabuta finds that upgrading to TOS 2.06 couldn't be simpler...



The latest addition to The Upgrade Shop's range of hardware is a solderless TOS 2.06 upgrade for the STe. My first impression was that of surprise on seeing how small the board actually is - not much bigger than two TOS ROMs sitting next to each other!

The package comes with an eight page installation manual and colour pictures as illustrations. Coupled with that is a 40 page TOS 2.06 manual. Is it as easy to install as TUS boast? The answer is simple - "Yes". A typical installation will take around 20 minutes from opening up your system to putting it all back together.

Unlike its contenders, this upgrade doesn't hog the CPU so you can add other upgrades which do need the 68000. It is also very slim, easily fitting under the floppy drive. All you do is unplug the TOS 1.6/1.62 ROMs from your STe and plug the new board into the space. Cut a hole in the casing for the hardware switch and that's it!

You can discard the old TOS ROMs as the upgrade comes with TOS 1.62 and 2.06 on board. So if you have TOS 1.6 in your STe, you effectively get two upgrades in one. Some STe TOS ROMs have 32 pins and some 28. Other TOS upgrades require

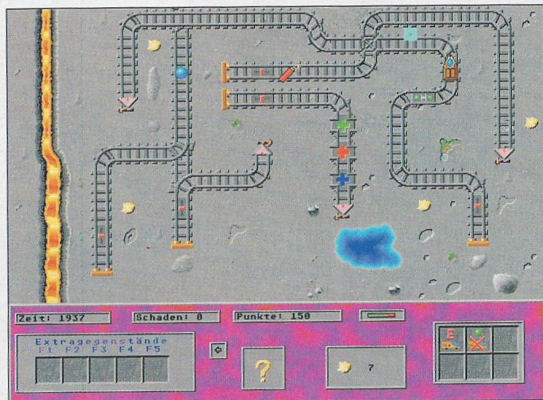
you to desolder a couple of resistors on the motherboard. TUS' one makes it even easier: the upgrade board contains jumpers to plug together, depending on how many pins your old TOS ROMs have.

TUS have certainly made the phrase 'Plug and Play' respectable again. There are very few STes which have TOS soldered in but if you are of a nervous disposition where soldering irons are concerned, TUS will do the upgrade for an extra £15. You'd be crazy not to upgrade at this price!

SOLDERLESS TOS 2.06 UPGRADE	
T.U.S. DEVELOPMENTS.	
STE TOS 2.06 SWITCHER MODULE FITTING INSTRUCTIONS	
Publisher: The Upgrade Shop Contact: (01625) 503448 Price: £47.99 (£42.00 without TOS switch) Requirements: STe	Pros: Very easy to fit • cheapest TOS 2.06 upgrade on the market • sturdy Cons: Not solderless for all STes
SCORE: 9	

Transmission?

Carl Löfgren puts the first Falcon-specific CD ROM under the magnifying glass.



The full version of the game Golden Island is on this CD.



German Delta Labs media continues its Whiteline CD ROM series with the Transmission CD. While most other CD ROMs offer a wide and well balanced selection of software, Transmission is almost totally dedicated to fun and entertainment. The demo section is the largest and occupies 190Mb of the total 530Mb. If you are an owner of an SVGA monitor you're out of luck as most demos only run on RGB screens (or on a

TV), and the weirdest things can happen if you accidentally run a demo on the wrong monitor. Fortunately there's a text file to tell you which demos runs on which monitors and in which resolutions.

The collection of games is also impressive. Almost every game for the Falcon released into the public domain, together with some demos of commercial games, can be found here. Another heavyweight section is the graphics, which contains a wealth of animations (FLI, MPEG and AVI formats, together with their respective players), raytraced images, fantasy scenes, fractal generators and paint programs.

What makes this CD much more interesting and attractive than most is that it's the full version of the commercial Falcon game Golden Island and a registered copy of the shareware screensaver TurboBlacker (version 1.35g) are included.

If you are into games and entertainment, the Transmission CD is definitely worth a closer look. It's good to see producers doing something other than collecting archives full of utilities - perhaps we can look forward to seeing more dedicated CD ROMs in the future. The only real drawback I can find, is that some of the applications and text files are in German.

TRANSMISSION	
Publisher: Systems Solutions UK Distribution: Contact: (0181) 693 3355 Price: £24.95	Requirements: Atari Falcon030 with CD ROM Pros: Excellent value Cons: Some stuff in German mostly for RGB
SCORE: 7	

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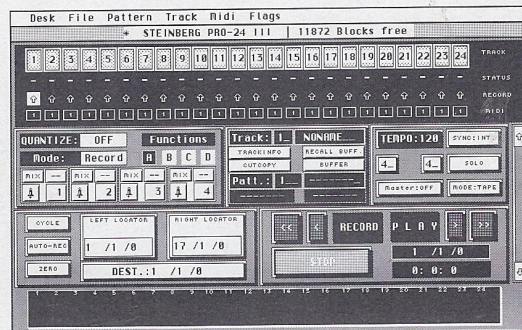
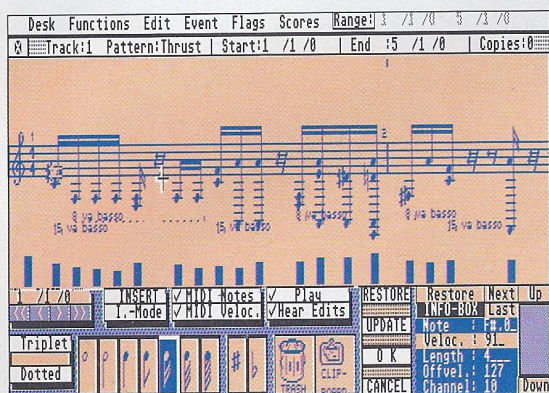
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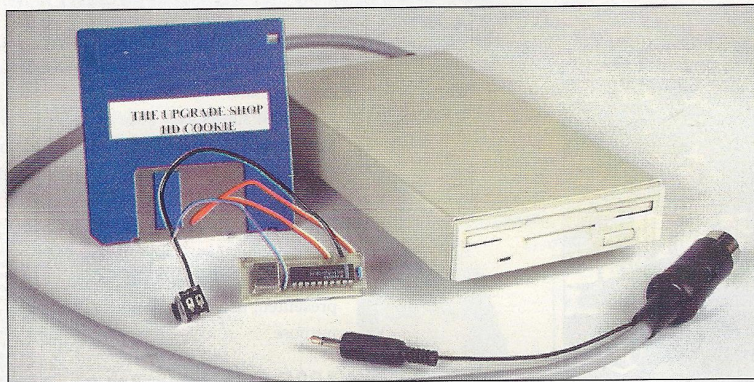
The Upgrade Shop

37 Crossall Street, Macclesfield, Cheshire SK11 6QK

TUS HD Module



You need to install a high density drive to store more on a floppy disk.
Denesh Bhabuta calls The Upgrade Shop for a solution.



If you can't yet afford a hard drive, the next best upgrade to enhance the performance of your ST is probably to install a high density disk drive. This will let you store twice as much information on high density floppy disks - the ones with a second square hole across from the 'write protect' tab.

Unfortunately you can't just replace the floppy drive in your ST. You need to add a special board to the ST's motherboard too. The Upgrade Shop have

come to the rescue with an all-new version of their custom-designed module that works with most STs from TOS 1.04

onwards. It is also the only one available that supports external high density drives too!

The 12-page installation manual is clear and comprehensive, taking you through every step in detail, yet it is somewhat scarce on pictures. Nevertheless, it tells you about pitfalls to avoid. The manual also tells you if the module will work in your ST. It needs to double the clock speed of the disk

controller to 16MHz for high density drives to operate properly. Various controllers are mentioned in the manual detailing the ones which work and those which don't.

Apparently STs before TOS

1.04 don't come with a disk controller which can be modified to work with high density floppy drives. So not only do you need to upgrade your TOS, but you need to upgrade the disk controller too. The Upgrade Shop offer a 10-day no quibble money back guarantee if you can't use the module in your ST, as long as the package hasn't been damaged in any way.

Installation requires some soldering so if you break into a sweat just looking at a soldering iron you can make use of the excellent fitting service by TUS at £15. The trickiest bit is soldering four pins from the module onto four pins of the Yamaha sound chip. A couple more connections need to be soldered before the job is finished.

Options

The module leaves you with a variety of options. You can have an internal high

density and an external double density; or even an internal double density and an external high density! The choice is yours.

The module comes supplied with a 3.5mm jack socket which you fit into a drilled hole at the back of the computer, next to the external floppy socket. This carries the high density signal for the external drive, and is only activated when a mini jack is plugged into the socket.

The programs supplied are well written and easy to install: just bung them in the Auto folder. These not only install a cookie to let your ST know that a high density drive is attached but also sets the seek rate to give high density support. The high density cookie is installed properly in TOS 2.06 STs, giving the High Density option in the desktop format box. If you are using another TOS version, then you need to install the program specific to your setup and formatting of high density disks is done by the included program.

I have been using this module in one of my STs for the past 18 months and have had no trouble whatsoever with it. It is a sturdy unit and does not cause the ST to crash with pre-formatted disks which were troublesome with my Falcon. A high density drive makes life a lot easier for copying and moving files and backing up your hard drive: you don't need as many disks for a start. If you run a floppy-only system, the amount you can hold on a disk is crucial and it makes a big difference to programs like Timeworks 2!

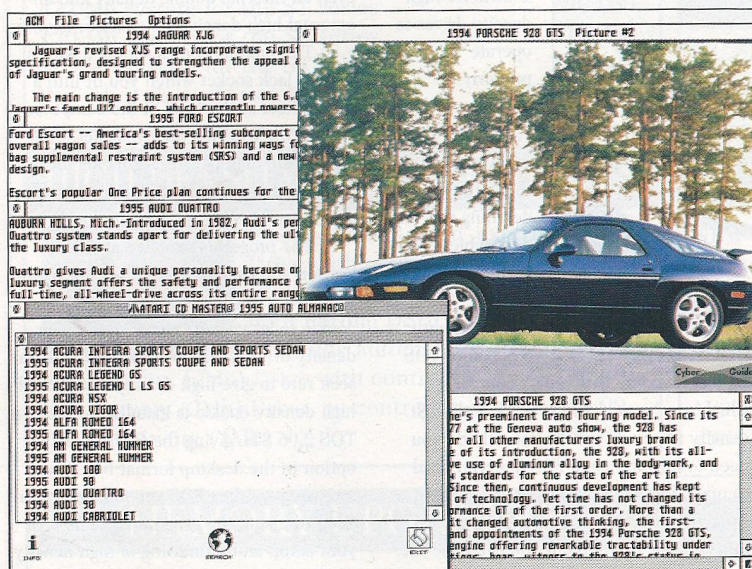


TUS HARD DRIVE KIT	
Publisher: The Upgrade Shop/JUK Distribution Contact: (01625) 503448 Requirements: Any ST with TOS 1.04 and upwards	Pros: Professional quality • easy to fit • cheap • external drive support Cons: Older machines need TOS upgrade • text heavy manual
SCORE: 8	

Atari CD Master



Hot on the heels of SARA comes Atari CD Master. Has multimedia finally arrived on the Atari? Steve Delaney checks it out.



flavour, but is nevertheless an invaluable reference aid.

ACM allows easy access to all the articles and pictures in Time Almanac, but the numerous mini-movies remain hidden beyond your reach. It's a shame really as this is where you could really have shouted multimedia from the rooftops. Nevertheless, the software is well presented, user-friendly and serves the purpose.

1995 Auto Almanac

This is a car enthusiast's dream. It contains comprehensive specifications on over 375 different models of the latest American, European and Japanese cars. Each entry is accompanied by between one and five pictures of the vehicle. There's also a selection of top tens on the best/worst value, most/least economical, resale value leaders and so forth. Articles covering advice on buying or leasing a new car and minimising your insurance premiums are also included as is an extensive glossary of terms to complete the tome.

The supplied ACM driver is identical in functionality to Time Almanac but with the pictures accessible from a drop down menu rather than the main menu. There are no accompanying audio or video clips with Auto Almanac, so ACM gives the same functionality as the PC software.

Atari CD Master (ACM) is a software package that allows you to use a number of DOS and Windows CD ROMs on any Atari computer. It is currently available in two configurations. Volume 1 contains drivers for Time Almanac of the 1990s, Time Almanac 1994 Reference Edition, UFO I, UFO II, Space Missions, 1995 Auto Almanac and MPC Wizard v2 while Volume 2 supports Total Body - Health and Mind and Pharmassist.

The majority of these titles are available direct from the publishers of ACM, although you will probably be able to source most of them in the UK. Each driver consists of a menuing system which gives easy access to most, if not all, of the data on the disc. The titles currently supported are all reference works and more are being added as an ongoing process.

The software is supplied on a single floppy disk and comes with a 24-page manual which covers both Atari CD

Master and Audio CD Master (an audio CD driver included in the ACM package). The manual takes a generic approach to the software with any deviation from the norm being included within Readme files on floppy disk. The software itself is point and click, and a powerful search engine is built into it so that specific subject matter can be found quickly. ACM was tested with three of the supported CD ROMs, so let's see how it shaped up.

Time Almanac of the 1990s

This title contains all articles published in Time Magazine from 1st January 1989 to 4th May 1994. In addition, it contains the entire CIA World Factbook 1993, USA and world maps, features on major events of the 20th Century, highlights on each decade and coverage of US presidential elections. All in all, it has a very American

Whether it's a Porsche or Jaguar, a Ford or an Audio, you'll find them all in Auto Almanac.



Health Power Pack

This is a compilation CD with Total Body, Bodyworks Voyager and Pharmassist on one disk. The Total Body driver was included for review and the Pharmassist software is nearing completion. It is expected to be ready by the time you read this.

Total Body is a massive encyclopedia covering the different systems of the body.

Audio CD Master

Audio CD Master is supplied along with both Atari CD Master volumes 1 and 2. It is a powerful audio CD driver which allows you to play music CDs on a CD ROM player connected to your Atari. It does not require CD ROM driver software such as Extendos or MetaDOS. Simply load up the program and insert your favourite CD into the drive.

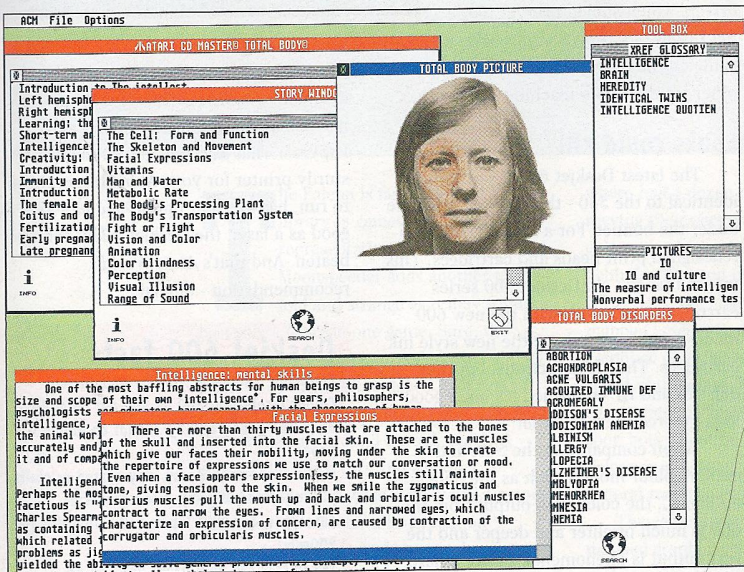
Audio CD Master is less than awe-inspiring to look at, but don't let that put you off. It fills up the entire screen on a 640 by 400 display and looks too big to be beautiful!

Looks aside, Audio CD Master has all the buttons you'd expect to find on a conventional CD player (play, stop, pause, resume, rewind and fast forward) and a few extra ones too. Skip allows you to specify an exact position within a track, particularly useful for D2D on the Falcon. Track lets you specify the order in which the tracks will be played, up to 16 tracks may be entered and your preferred settings can be saved.

The ability to enter album and track names is a welcome feature. Your data is saved to disk and the next time you insert the appropriate CD, the correct album and track names are displayed. This certainly beats the usual Track 1, Track 2... display. What's more, adding a CD to the database only takes up about 3K, so you can easily accommodate a reasonable size of collection on a 1Mb machine.

You can connect the audio output directly to the microphone socket on a Falcon and listen to your music through the internal speaker or monitor speakers. More useful is the ability to send the output through the Falcon's built-in sound sub-system using Audio Fun Machine. This allows before piping it out to your hi-fi.

Despite the vast array of features offered by Audio CD Master, it is not an alternative to ExtenDOS or MetaDOS since it cannot read data discs. It is however one of the most fully featured CD ROM audio players available. An excellent sound driver, despite occupying the entire screen!



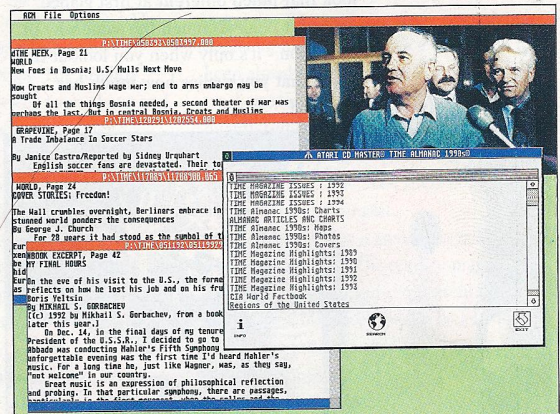
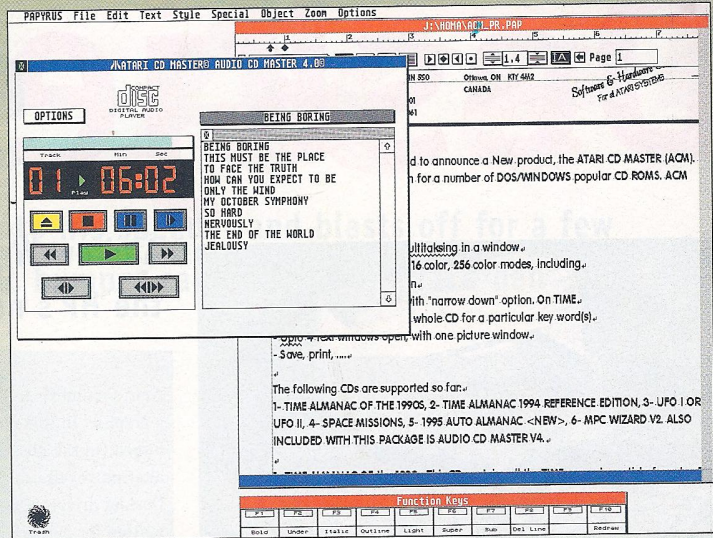
Total Body - just one of the increasing range of supported titles.

common medical disorders, a glossary of 1000 medical terms and about 50 narrated medical "stories", complete with animated clips. The video clips are played using an external PD player and run in slow motion, even when using the 68881 FPU version.

Apart from this small limitation, the Total Body driver is most impressive, allowing up to 10 windows to be open (subject to system capability), unlike the other drivers which support four text windows and one picture.

Verdict

In conclusion, ACM is certainly an innovative package in the sense that it allows Atari users to access CD ROMs which were previously restricted to use on



Time Almanac - a comprehensive guide to world events in recent times.

PCs. However it has a long way to go before it can be described as offering true multimedia. If the Total

Body driver is anything to go by, the software is making great advances and may well overcome the multimedia barrier with later releases.



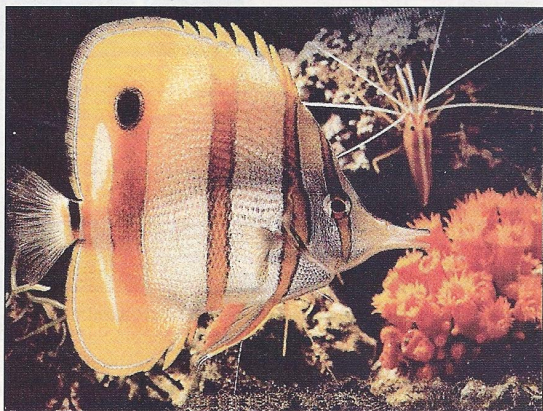
Deskjet 600



Andrew Wright looks at the HP's new 600 dpi Deskjet.

The only thing that stops this getting an Atari World Beater badge is that Atari owners can't use it to the full.

It's only a few months since I reviewed the Deskjet 540 - and even fewer months since I bought one - so nobody was more surprised than I was when HP announced yet another model. The Deskjet 600 doesn't look that much different at first glance. Indeed it behaves much the same way in operation - it's only when you look at the specs that you realise how much has changed.



A 256 colour image printed full size from Imagecopy at 150 lines per inch on clay-coated HP paper (11p a sheet).

If that sounds like a poor indictment of the new model, it isn't meant to be. The main change is full 600 by 600 dpi resolution for black text, something which isn't immediately obvious. If you print from programs like Wordwriter, Firstword Plus or even from the desktop via the Show/Print/Cancel dialogue box, you'll see the full 600 dpi output because those programs are printing directly to the printer and using its internal fonts. And very nice and sharp it is too.

Try to print from something like Pagestream or Papyrus and you'll notice the difference. These programs print in graphics mode, using their own scalable fonts which are turned into bitmaps in the

Atari's memory and then printed as a graphic. In this mode you are forced (in the absence of any alternative) to use the existing Deskjet drivers which were only written for 300 dpi models and the end result is... 300 dpi output.

To some extent this is an oversimplification as there are programs that can print at 600 dpi. That's Write 3 has Laserjet 4 (600 dpi) drivers which should print at the full resolution, provided you have got sufficient memory to rasterise the page. In other words, a 4Mb machine *minimum*.

Looks could kill

The latest Deskjet 600 is outwardly identical to the 540 - the main changes are under the bonnet. For a start the 600 has redesigned print heads and cartridges. This means that the old Deskjet 500 series cartridges won't work with the new 600 model - you have to have the new style ink cartridges. They look identical but they don't fit and HP confirmed it's not a good idea to force them to either.

When compared to the 540, and earlier colour models such as the 550C and 560C, the colour ink output from the 600 is much brighter and deeper and the text output is phenomenal. I have a hard time telling my 540 output from that of a low end laser. With the 600 it's easy to tell the difference - the Deskjet's crisp, black text is miles better than cheap 300 dpi laser.

With street prices getting down to around £250, the 600 is likely to be in heavy demand, although the advantages for Atari owners are definitely diminishing as new drivers are unlikely to appear in



The original image.

abundance except perhaps for more modern applications like NVDI 3 and Papyrus. That said, if you want a good sturdy printer for your Atari that is cheap to run, has a colour option and can look as good as a laser, the Deskjet really can't be beaten. And that's *Atari World's* recommendation - official!

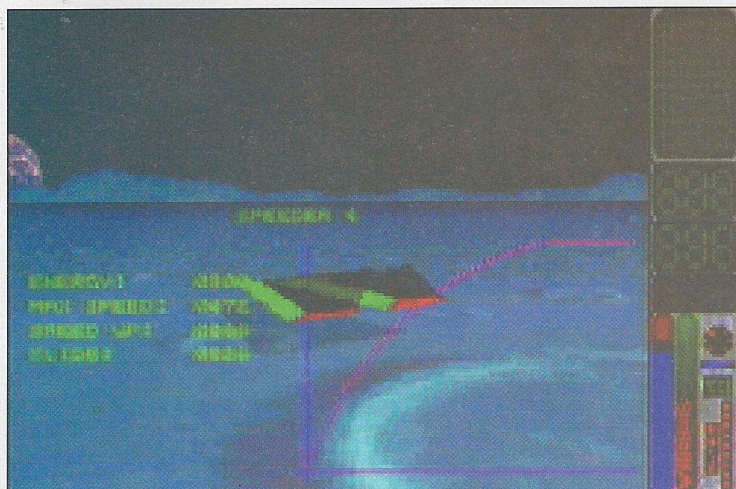
Deskjet 600 facts

Black ink resolution: 600 by 600dpi max.
Colour resolution: 300 by 300 dpi on plain or coated paper, 600 by 300dpi on glossy paper.
Media supported: Glossy, clay-coated or plain paper (up to 135gsm), trans-parencies, envelopes, adhesive labels and card stock (to 200gsm).
The in tray can hold pages down to A5.
Internal fonts: Courier, CG Times, Letter Gothic, Univers in landscape and portrait orientations.
Supplied: 16 TrueType fonts on HD disk.
Print speed: From 4 minutes for a full A4 colour page to 4 pages a minute in Econofast text mode.
Dimensions: 436mm wide by 199mm high by 145mm deep.
Internal memory: 512K
Weight: 5.3kg

HP DESKJET 600	
Manufacturer: Hewlett-Packard Contact: 01344 369222 Price: £340 (RRP)	Requirements: Any Atari Pros: high resolution-colour option cheap to run Cons: Drivers only for Windows
SCORE: 8	

Space Ace!

Nial Grimes buckles into his speeder and blasts off for a few rounds of intergalactic bumper cars. What "one race ban"?



Choose your speeder – will it be fast and fragile or slow and strong?

The Falcon is fast gathering a good library of games, with representatives from most genres. Moonspedder adds another to the fold and strange as it may sound is basically a formula-one game. Sure, the green and pleasant countryside surrounding Silverstone has been replaced with rugged lunar landscapes, but the idea is still to pilot a cruise missile around a track, steering clear of the other cars and avoiding collisions with the walls. And, while Damon Hill can only wish for a laser cannon mounted on the front of his car, these speeders all come complete with offensive capabilities – just add ammunition.

In common with all good racing games, you can choose to do noble battle in a number of different vehicles, ranging from

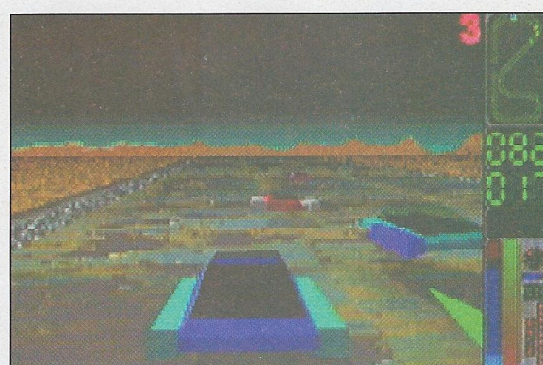


Power-ups and penalties are scattered around the track – look out for the laser ammo!

without so much as spilling your coffee at the other. The grand prix theme continues through to the play mode stage, where you can either opt for a practice session or a full racing season, the aim of the latter being to finish above position four across a series of ten tracks.

where half a dozen other pilots await, revving their particle drives. The brightly coloured vehicles are viewed from above and behind, with good use of transparency effects over the slightly blocky texture-mapped landscape. However, this level of graphical detail does take its toll on the speed of the game. Race starts are sometimes less than smooth, but the pace soon hots up as the field spreads out and the Falcon is able to cope admirably with general race conditions.

The gameplay complements the texture-mapped graphics nicely. Each track is replete with electrified run-off patches on tight corners, jumps and bonuses – including ammo for the laser cannon – that attempt to lure you away from the racing line. Piloting the speeders and coping with the tracks takes practice. Part of the problem is the view angle which, although adjustable, does make it a little difficult to see what's coming, and the "busy" textures used on some levels compound the problem. Mind you, the general response of the speeders is good, regardless of whether you decide to use the



By the light...

Having selected the right speeder, it's onto the race grid,

Some of the textures are a bit gaudy, which makes navigation tricky at times.

mouse, joystick or Jag Powerpad. The computer "drivers" also show a satisfying degree of intelligence – it's a real battle to keep ahead at times. Your exploits on the track are accompanied by a variety of quality tunes (title music excepted) and other nice touches include a flight over a wireframe model of each track before you actually start the engine.

Moonspedder is a game that falls slightly short of greatness. The texture-mapped graphics look cool and the presentation is exceptional but deep down it lacks a little something in terms of playability. However, if racing games are your bag, you'll probably enjoy it nonetheless...



Cornering takes practice in the low-grip speeders; who needs a no-claims bonus?

MOONSPEDDER

Publisher: Comscan France
UK Distribution: Merlin
Contact: 01452 770133
Price: £29.95

Requirements: Falcon '030, 4Mb memory, hard disk.
Pros: Texture-mapped graphics • great sound
Cons: A little jerky at times • busy textures



SCORE: 6

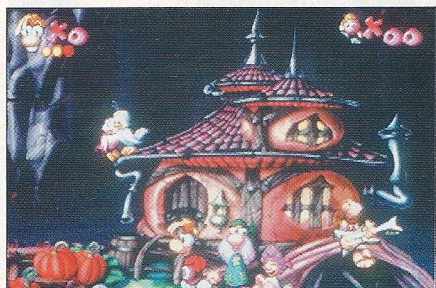
Rayman



One of the most eagerly awaited titles for the Jaguar has finally beamed onto the streets. Iain Laskey finds out if it was worth the wait.



Rayman is one of those classic 'cute' platform games. The object of the game is to free the Electoons and ultimately free the Great Protoon in order to return Rayman's world to harmony and vanquish Mr Dark who has caused all the chaos to start with. Initially you have very little in the way of abilities and skills. As you finish certain sections,



you are rewarded with new skills and powers to help you. Some of these are permanent and some only last for

that level. Unusually, you can return to previously finished screens to try them with your new abilities.

The gameplay is the usual platform affair with lots of jumping, climbing, crouching and walking as you explore the world. The levels are well designed and help you to get into the game gently.

The holiday doesn't last too long though and soon you have to start to work quite a bit harder. Some enemies take quite a bit of dodging and shooting to finish them off. You can punch down berries and use them to float about on the otherwise fatal water, enabling you to reach power ups and some of the electoons. You need to use swings, moving clouds and even more to complete some of

the levels and there are hidden bonus levels which can be accessed by collecting Tings and finding the hidden Wizard. There is also a hidden breakout type game too but I won't spoil it by saying how you find it (bet that's 'cos you couldn't find it - Ed).

What really separates Rayman from it's peers is the excellent animation. The movement of both Rayman and the various other characters is superbly done. It really is just like watching a cartoon - right down to the tiniest detail. When you die, Rayman appears on a stage and if you continue he bows and cartwheels off stage. Deciding to finish results in him despondently slouching off the other side of the stage. Wonderful! There are one or two oddities though. Periodically Rayman looks at you and seems to be talking but no sound comes out. Maybe an unfinished feature?

The graphics are generally very good. With 65,000 colours, smooth scrolling and over 50 animated characters, everything just looks and feels very polished. The controls are well chosen and perfectly balanced. The numeric pad isn't used and only the top half of the controller is utilised. Some games are awkward to play due to the control method but everything here just feels right. You can save three different games with your initials and a

percentage counter shows you how far you have got as well as a map showing each location visited.

The only real criticism I can raise is regarding the music which is rather too twee and soon starts to grate. Luckily you can turn it down but Ubisoft claim there are 45 tracks so what it lacks in quality, it makes up for in quantity. The sound effects are adequate and plentiful but nothing fancy. The PSX version has superior sound but being a CD format it should have. For a cartridge based title though Rayman doesn't do too badly.



Rayman was first shown almost a year ago and even back then it looked impressive. Since then it looks like Ubisoft have been busy fine tuning every element. It looks great and plays like a dream. While it would have been almost impossible to live up to the hype, Rayman comes very close indeed. This is one of the more expensive Jaguar games but it won't disappoint. Rush out and buy it today!

RAYMAN	
Publisher: Ubisoft Contact: (0181) 941 4004 Price: £54.99 Requirements: Jaguar only	Pros: Cartoon quality animation • well planned levels • addictive gameplay Cons: Lacklustre audio
SCORE: 8	

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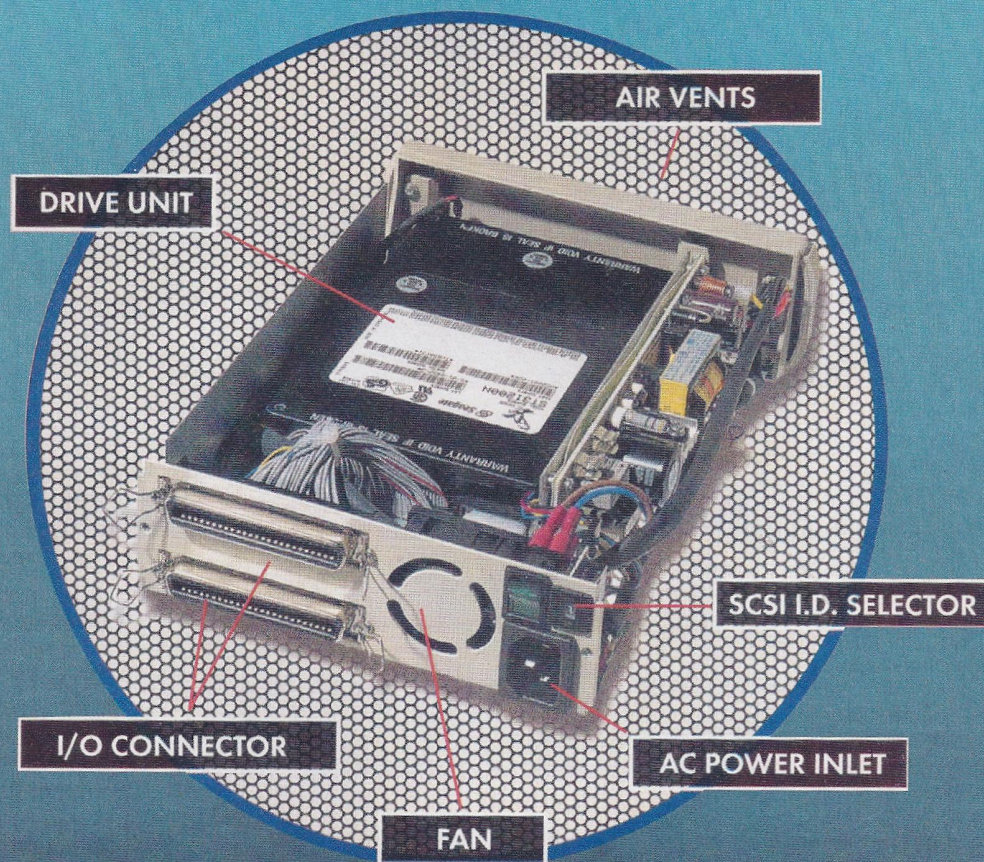


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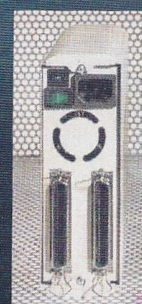
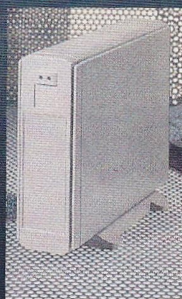


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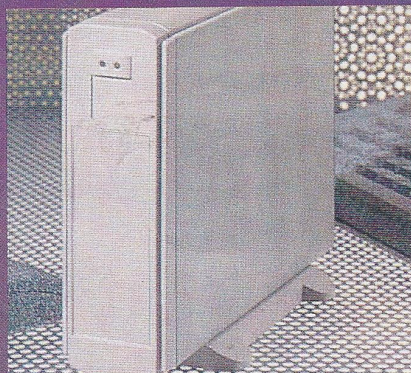
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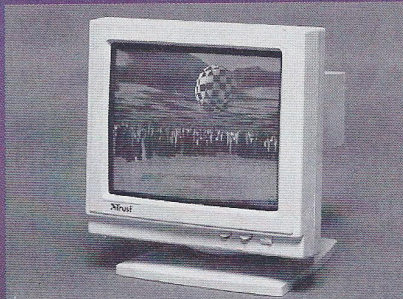


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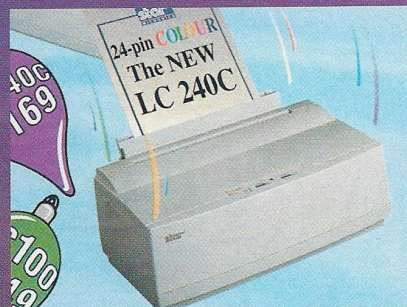


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Natural GAS

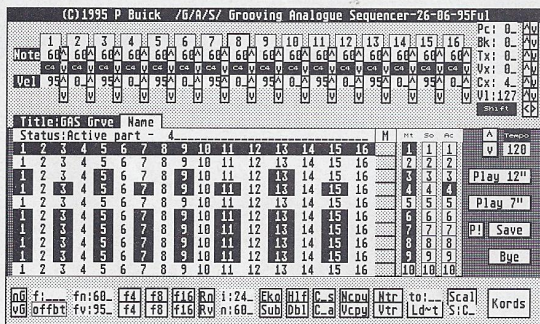
Is it a groove generator?

Is it an analogue sequencer?

Whatever it is, Ian Waugh discovers it's a GAS...

I love composition programs. Does anyone remember Intelligent Music's M? I actually used it to write the music for a Canadian relaxation video. GAS uses a few similar ideas and, as such, is very much an algorithmic composition program rather than an accompaniment generator like Band-In-A-Box.

It runs as a desk accessory so it can be used in conjunction with your favourite sequencer and this is the object of the exercise - to use GAS to generate riffs and grooves, load them into a sequencer and incorporate them in your music. It has two screens but the main one does not look particularly inviting. It's very numeric and the control buttons contain rather obscure mnemonics. Still, once you get into the program, it all falls into place.



GAS's main screen may look like the output from a decimal-to-hex converter but the functions soon fall into place.

Step by step

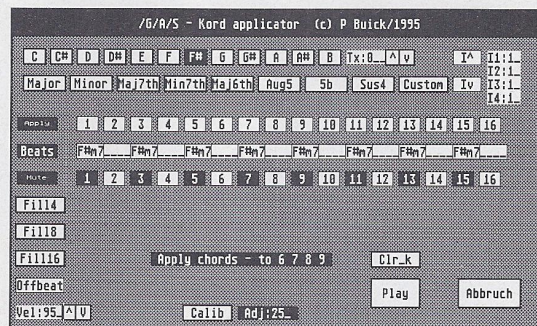
GAS can be used in two ways. At its simplest level it is a 16-step analogue sequencer. The steps appear along the top of the main screen. You can program each step with a note pitch and a velocity value. If you don't program a step or give it a velocity of 0, it effectively increases the duration of the previous note so you can create rhythmic and melodic riffs.

Like the old analogue sequencers, each step can only hold one note so this is basically a monophonic sequencer. However, the program actually has ten such settings which the program calls parts although you could think of them as tracks. Each one can be assigned a MIDI channel, bank select and program number so you can create complex polyphonic lines. You can also create four-note chords in the chord page and these notes are assigned to tracks 6 to 9.

There are options to fill 4, 8 or all 16 steps with a certain note and velocity value. The offbeat function lets you move the notes along a step and the echo function creates a series of notes with decreasing velocities. Tracks can be transposed and notes shifted so there is reasonable scope for tweaking the tracks in a global fashion. The central area of the screen shows which steps contain note data.

The notes are given in MIDI note numbers rather than note names so you'll probably want to keep a list handy. The note names actually appear in the step display at the top of the screen. You can increase and decrease the values using up/down arrows but the note names don't change until the screen is updated. Other features include a copy functions and the ability to mute tracks.

You can create gradient fills and generate random values for the notes and velocities. This is ideal if the muse has gone to visit Paul McCartney although, as you might expect, pure random note generation has got



In the Kord page you can create chords and place them on any of the 16 steps.

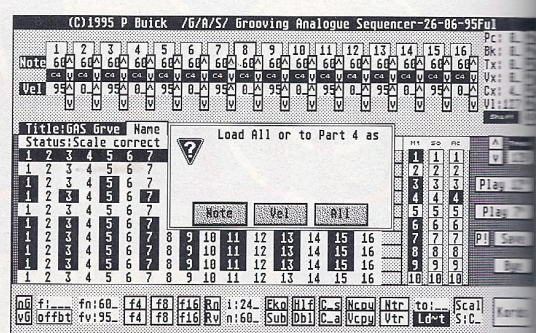
as much chance of producing an interesting riff as throwing a sack of Jersey Royals onto a piano keyboard.

School of correction

But GAS has another trick up its jumper - scale correction. This forces the notes onto certain divisions of the scale. You have to load scales from disk if you want to use them but once loaded, a scale stays in effect until you change it.

Twelve scales are supplied including blues, Dorian, Hungarian, Lydian and oriental. You can also create your own using a text editor. The manual says nothing about this but a scale file is simply a list of the notes the program is to use and if you look at one you'll soon see how it's done. GAS treats pitch and velocity separately, a fact the blurb makes much of. If you create an interesting set of pitches, you can experiment with the velocity to produce different rhythmic effects. Conversely, if the velocities produce an interesting rhythmic structure, you can experiment with the pitches.

The chord page is a separate screen. You can select a note and any of eight preset



GAS handles note pitch and velocity separately. You can load them individually and apply them to other parts.

of hype and adverts for other Intrinsic Technology products and the tutorial is as poor as the one in the manual. It also uses the PC version of the program which, while virtually identical in operation, has a much better screen layout.

But the program is not without its humour. The chord page is called Kord (okay, so it's subtle), and to exit the Kord page you click on Abbruch which is German for quit. The glossary includes the word Nonce (someone who hasn't bought GAS!) and there's a pretty lengthy definition of Piracy.

"I can see GAS appealing to the analogue brigade and those who enjoy experimenting with alternative composition programs".

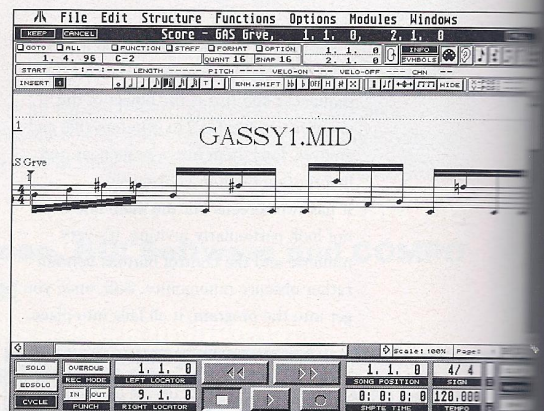
GAS won't win any prizes for looks or charm and there are a few areas of operation which could be improved. Even the product name - it's actually called /G/A/S/ - is pretty unimaginative. It would really nice if the programmer

took some third-party advice on the design and spruced up a few areas. There are just a few things preventing this being a cracker of a program and its currently not making the most of its potential.

But it does what it sets out to do and when I'd sorted out what everything does I did manage to generate some interesting material. It works well as an analogue sequencer, too.

[illegible]

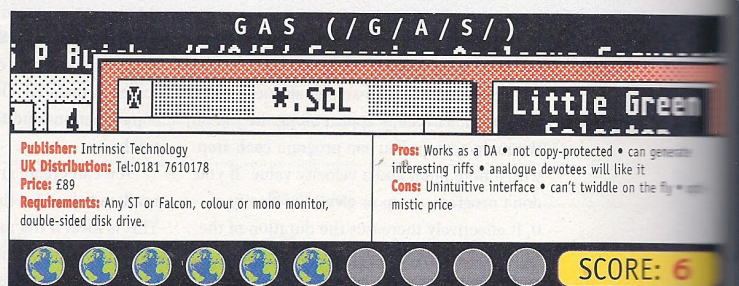
GAS compositions are one-bar long and it saves each part in MIDI File format as a separate pattern.



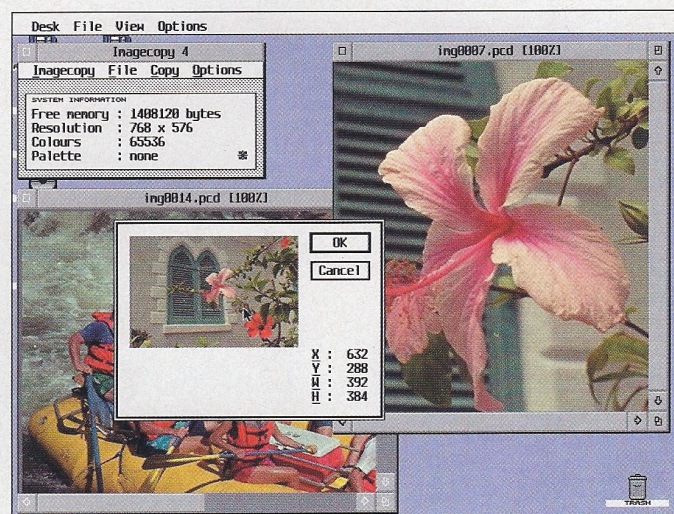
One of GAS's music lines in Cubase ready for further editing.

Natural

GAS



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Substation

Guide *Part 1*

Need a little help? Graeme Rutt presents the first instalment in a two part guide to the Swedish supergame, Substation.

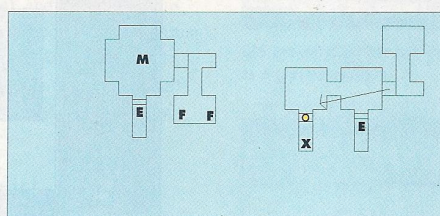
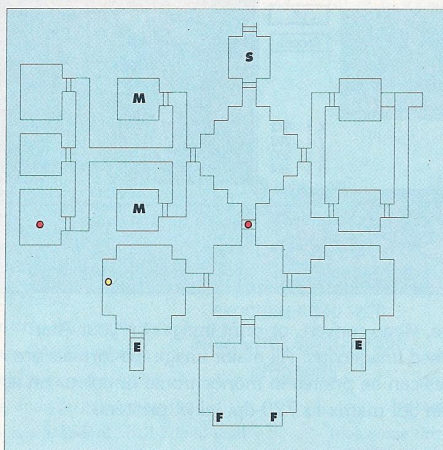
Ten-HUP! OK, stand easy. Welcome, Marine, to the first part of our guide to Substation. This tuition is presented to your select squad as a prime example of what

to do in a tactical combat situation.

Combat maps and the words of survivors (and the last words of a few near-survivors) have all been assimilated, together with data on enemies and

armaments, into this two part guide. Given this data you will enter the Substation Simulator and will be expected to complete the mission with little or no difficulty. Now drop and give me twenty.

Level 1: Asuka Monsters on this level: Robot, Droid

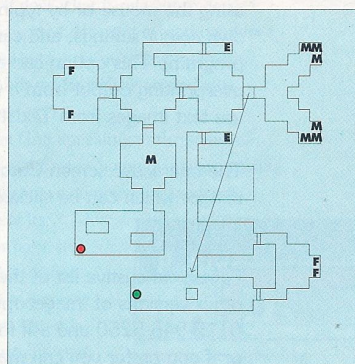
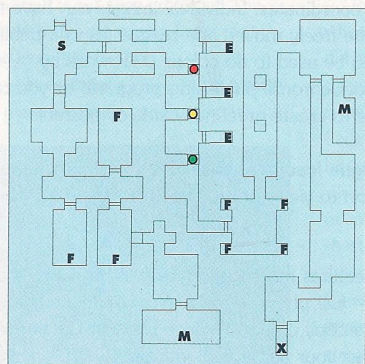


Akusa

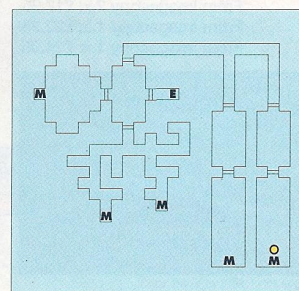
A poorly defended position makes Akusa a breeze for the new marine. Run for the red key, go through the red door, get the yellow key and head for the eastern elevator that leads straight to the exit. Remember to maintain health and ammo levels at all times.

Map key

- S = Start
- X = Exit
- E = Elevator
- M = Medikit
- F = Food
- G = Goggles
- = Red Key
- = Yellow Key
- = Green Key
- = Red Door
- = Yellow Door
- = Green Door

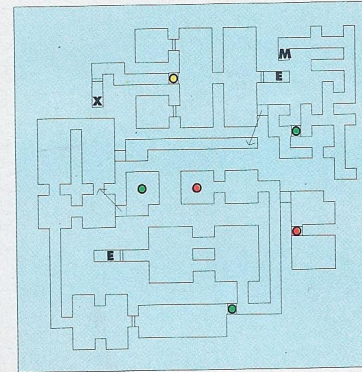
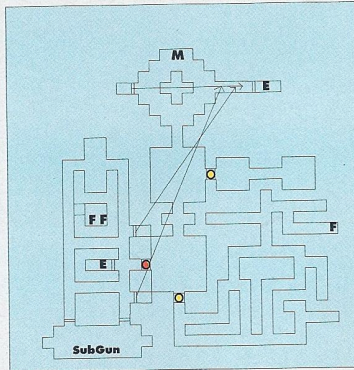
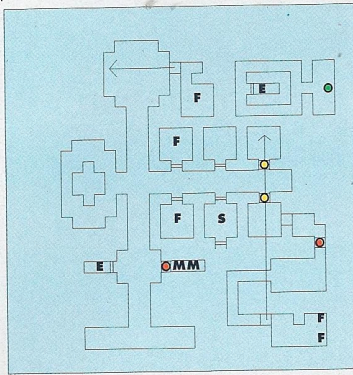


Level 2: Nara Monsters on this level: Robot, Droid, Yellsa

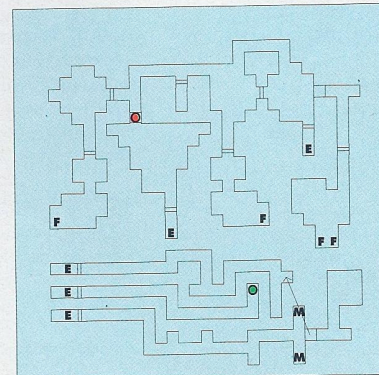
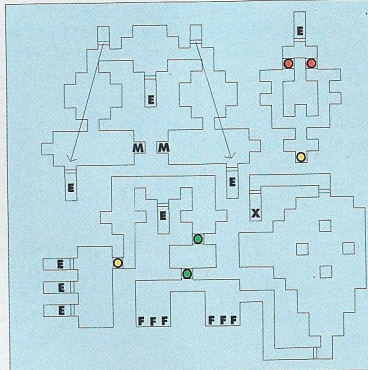
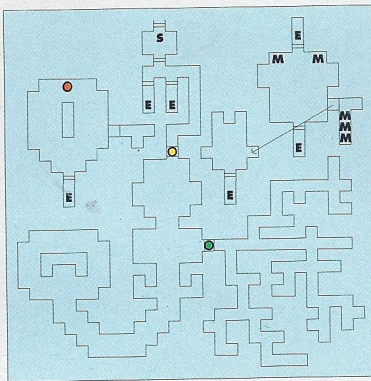


Nara

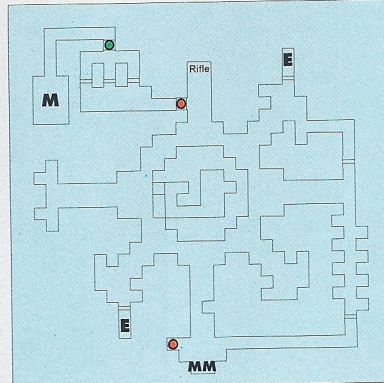
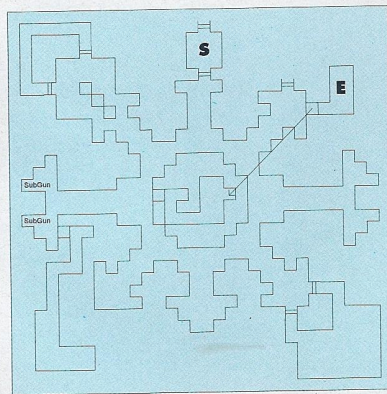
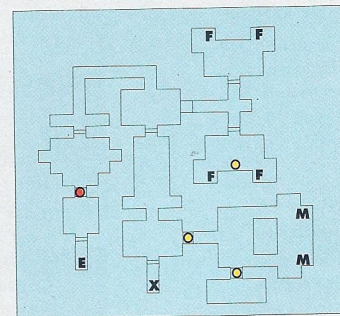
A tale of three elevators. East of your starting position you'll find the first elevator, this leads to the first key which leads to the second elevator - and so on. Health and ammo are abundant so you shouldn't have too much trouble. Check around the north-east sector of sublevel 1 for your first mine.

Level 3: Heian Monsters on this level: Spider, Crab, Robot, Knight

Heian

Once you've found the red key, get your butt back down to sublevel 1 to collect the medikits found in the room just across the hallway from the elevator. Beware that this room may contain a nasty surprise. You may consider making a quick dash to sublevel 2 to get the SubGun before opening this door.

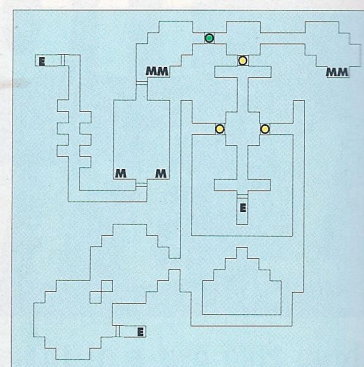
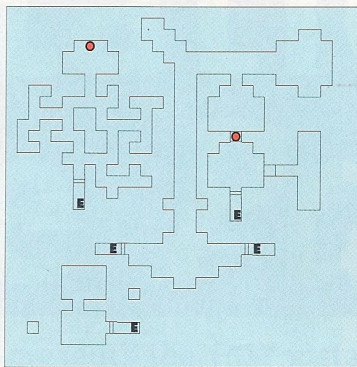
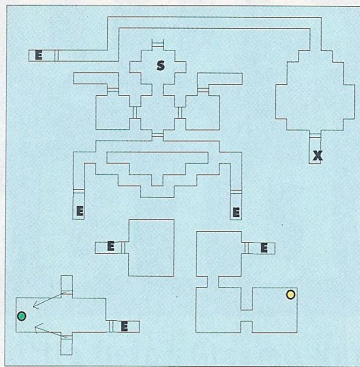
Level 4: Kamakura Monsters on this level: Spider, Robot, Alien, Twin gobe

Kamakura

This is one hell of a complex substation, with a huge amount of elevators. Try to keep track of where you're moving in this level. To kill the Twin-gobe, use your SubGun and side-step away from his lava-ball projectiles. The exit door won't open until he's dead.


Level 3: Muromachi Monsters on this level: Probe, Droid, Crab, Xorper

Muromachi

Muromachi is a much simpler level than Kamakura - at least relatively. A quick finish involves running from the north-east elevator to the south-western (on sublevel 2) - remembering to pick up the red key. Go for the rifle at the top of sublevel 2. To enter the bonus ammo room at the end of the stage you'll need the hidden keys.

Level 4: Kamakura Monsters on this level: Droid, Crab, Lizard, Xorpher



Tokugawa

This level has lots of booby-traps, but also substantial amounts of H2SO4-mines, which can come in handy if you're running low on ammo. In the lower left corner of sublevel 1 are two doors, which are activated by the floor tiles close to the green key. The lizards emerging from the doors are probably best disposed of by placing a mine between the doors. Just before the exit lies a corridor of bombs. Use your legs...

The Monsters



Robot

Strength: 8
Hitpoints: 5
Alien robot with handgun



Droid

Strength: 5
Hitpoints: 1
By the time you descend into the base, these droids will have entered Emergency Mode, attacking all humanoid life-forms. It's more of an annoyance than a threat, mainly due to its weakly constructed arm extremities.



Yellba

Strength: 13
Hitpoints: 13
Large biped with ferocious claws. Videotapes show these creatures to be very resistant to physical damage.



Spider

Strength: 3
Hitpoints: 4
These spider-like creatures moves in flocks at high speed.



Crab

Strength: 7
Hitpoints: 9
This creature is a genetically mutated version of the common crabfish. It is far more aggressive than the normal crabfish, and avoiding its claws may prove a good move.



Knight

Strength: 24
Hitpoints: 17
This large ape-like creature may not be very intelligent, but remains a threat due to its powerful fireballs.



Probe

Strength: 4
Hitpoints: 0
The probes were designed to fly around a complex, reporting all activities to the main computer system. For cost reasons, the probes' control system is programmed to override all priorities and escape at any indication of gunshots.



Xorpher

Strength: 11
Hitpoints: 7
All data on this life-form was erased in a virus attack. Backup files are yet to be retrieved. Probably worth avoiding in the meantime...



Twin-gobe

Strength: 150
Hitpoints: 8
Here's one to sink your teeth into. The only technique advisable is hit-and-run. H2SO4-mines should be effective here.



Lizard

Strength: 14
Hitpoints: 8
The lizards are highly mobile and extremely scary, using ceilings and walls to creep up at you from behind. Watch your back, soldier.



Shizer

Strength: 31
Hitpoints: 14
Reptile-like creature. Powerful projectile weaponry makes this one nasty, especially in groups.



Nigley

Strength: 10
Hitpoints: 13
Although not very fast, the Nigley's dark complexion makes it hard to spot. Usually you won't see this creature until one of his blue projectiles hits you where it hurts.



Crowd controller

Strength: 45
Hitpoints: 1
The "Crowd Controller" is one of the worst creatures you're likely to run into. Moving at a relatively low speed, his weaponry is to be taken very seriously indeed. Approach with caution.



C/C Droid m.31

Strength: 250
Hitpoints: 2
The C/C Droid, no matter what Commander Scott says, is not your friend. Due to some skilled rewiring he will attack you with his minigun. The OMC will properly dispose of him, but it will not be a walk in the park...



Neptar

Strength: 350
Hitpoints: 15
This is your final and greatest opponent. Not only are his projectiles extremely dangerous, he can also take ridiculous amounts of damage.

Win a copy of this great game!

All you have to do is enter...

Merlin - their name comes from the hawk, not the enchanter - started three years ago as a small PD library. The association with UDS and particularly Peter Zetterberg has been established over two years. They were thrilled to have been offered the distribution of Obsession and then Substation which they knew would be winning programs straightaway. Unique Developments, Sweden is based in a airy office in the centre of Norköpping in the heart of Sweden. Their first commercial release was Obsession for the Atari STe which gave new life to the Atari games market. Substation is their second commercial game, at last giving Atari owners a chance to play real-time 3D world.

The association with Merlin has proved to be long and successful with frequent faxes and telephone conversations ensuring that the latest information about their products reaches the public as soon as possible. Merlin are offering 5 copies of Substation to lucky Atari World readers. Simply answer the questions below and send them in (postcard please) to this address: Atari World, Unit 3, Green Farm, Abbots Ripton, Huntingdon, Cambs PE17 2PF. Put your own name and address on the card too please!

1. What are Merlin named after?
2. Where are UDS based?



C-LAB

FALCON MK I

The really great news is...

...that the C-Lab Falcon MKI will now start at £799 with a 4meg machine which will be ideal for use with Steinberg's Cubase Score or E-Magic Logic (at twice

the speed of the ST's) and any other

Falcon compatible software. It

will also come with a Desk

Accessory program which allows

the DSP audio circuitry of the

Falcon to be used for stereo effects and

graphic equalisation while a MIDI

sequencer is running.

Although there is no hard drive in this

computer to record audio to, the

computer will still be optimised for and

tested with Cubase Audio. All that is

needed is a suitable drive and from now

on, C-Lab will be supplying their 270meg

Syquest drive with Cubase Audio 16

pre-installed and a demo song on the

free cartridge. The drive has been tested

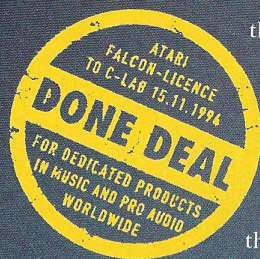
with both 8 track and 16 track mode in

Cubase Audio 16.

For further details, contact your nearest

C-Lab dealer or Digital Awareness at the

address below.



DIGITAL AWARENESS Eurotec House, 31-35 High Road, Chadwell Heath, Essex RM6 6QW, Tel: 0181 598 8081, Fax: 0181 598 8984, Email: digit_aware@cix.compulink.co.uk

Inside

Out

This month Paul Rossiter looks at the keyboard and sound system of the Atari series.

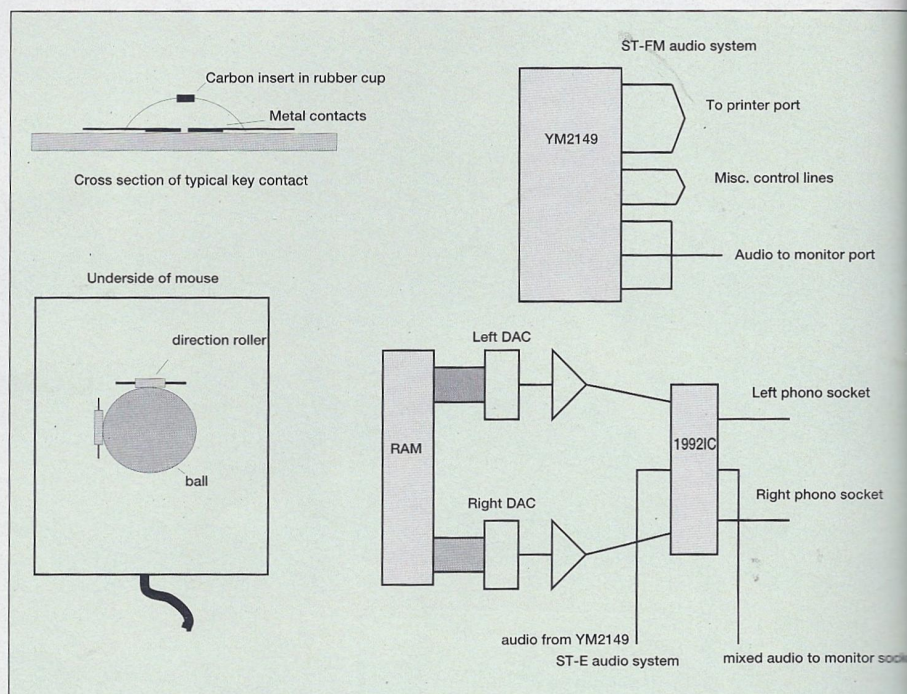


The keyboard of the Atari ST has remained remarkably constant over the progression of machines from the ST right through to the Falcon. As with any keyboard there is a matrix of switches which are scanned electronically and the key which has been pressed causes information to be sent to the central processor to be acted upon.

The ST design incorporates a dedicated 8-bit microprocessor to reduce component count and increase reliability. The switch itself is incredibly simple; a small rubber dome with a circular piece of carbon in the top which is positioned over a pair of metal contacts. When the key body is depressed the dome is deformed and the graphite makes a contact with the two metal contacts. The back pressure on the key is provided by the springiness of the rubber dome. While it seems somewhat crude, the keyboard gives little trouble in this area, and although excessive word processing use can actually wear away at the graphite, this takes many millions of depressions.

The main failing area of the keyboard is the ports for the mouse and joystick, repeated insertions can easily crack the internal soldered joints, to repair these the whole keyboard has to be totally stripped down and the joints re-soldered, not a difficult job but quite fiddly and time consuming.

The STe boasts two extra ports on the



side of the main system, these were intended for analogue joysticks where the movement is proportional to the movement of the stick not simply an on/off switch like traditional controllers. Unfortunately there is only a very limited amount of software which can use these ports and so are a bit of a white elephant.

The Mega, Mega STe and the TT all boast a separate keyboard connected by a RJ-11 curly lead. The key action on these is superior to the base keyboard due to the use of proper switches instead of the rubber cups. The ports for mouse and joystick are also sensibly located which prevents the problems of port wear.

Original sound

The sound system built into the original ST was a bit of a disappointment, being based on an old 3 channel tone generator the Yamaha YM2149. This chip provides 3 independent channels each of which can produce a tone whose frequency (over a range of 30Hz to 125KHz), amplitude and envelope may be varied, and a noise generator. The tones are all mixed together, buffered and then fed out to the monitor socket. Considering how crude the hardware is the quality of the output can be surprisingly high especially with modern games. The sound chip also incorporates two 8-bit bi-directional data ports, one is used to drive the parallel printer the other to help control the floppy disk drive. The remaining lines can be used for enhancements to the machine such as with Overscan. These ports are readily programmable by direct hardware addressing.

The 6301 keyboard controller

Built into the keyboard is a 1Mhz 8-bit micro controller, the Hitachi 6301. This controller has built in RAM and ROM which runs a custom program to scan the keys, check for mouse and joystick activity, control a real time clock and communicate serially with the main 68000 processor in the ST itself. The processor can also be talked to by the ST; the ST can change mouse scaling rates and set the real time clock. There is even the potential for a virus to hide inside the keyboard processor's RAM and the well known anti-virus checker UVK does check the contents of the 6301 specifically for this purpose. As the 6301 was designed as a general purpose controller, it can be run in several different modes of operation (memory configuration, port control and so on). These are entered at power on time by the state of various input lines. These lines happen to be connected to the joystick ports - if mouse buttons or fire buttons are held down at power on the processor can start working in a non-standard mode which crashes the on board program necessitating a reboot. This can commonly occur if an auto fire joystick has been left switched on; if the fire signal is present when switched on the ST refuses to work properly.

The STe

To maintain compatibility and still remain useful as it controls the printer port, the Yamaha chip is still present in the STe. To provide the extra facilities the STe has a far more sophisticated stereo sound system built in. Digitised data that is held in memory is fed to 2 DACs (Digital to Analogue Converters) which produce an analogue representation of the original signal, this is fed along a chain of OP-AMPS to clean it up, buffer it and then eventually fed into a National 1992 tone control device.

The mouse

Most mice operate in a similar way and the standard Atari mouse is no exception - a large rubber covered ball is allowed to rotate inside the mouse, the movement is transferred onto two small rollers which are offset by 90 degrees. The ends of the rollers have small discs with many radial slits in them and a small infra red beam is shone through the discs and the movement of the discs causes a succession of pulses to be output to the keyboard controller. The signals from the two discs are slightly offset which allows the keyboard controller to decode which way the mouse is moving and how far it has moved. The controller then scales the movement and sends a stream of data to the ST so that the ST can update the pointer on the screen. The left and right buttons are simply crude switches which tend to quickly wear out. Any serious ST user has junked the Atari mouse long ago and purchased one of the far superior mice readily available. Mice are notorious for picking up dirt which then transfers itself onto the rollers and they then become jerky and erratic in operation. To clean the mouse first remove the ball and then, using a cotton bud dipped in alcohol or other solvent, gently clean the rollers. Optical mice have no moving parts and do not suffer from this problem. They shine beams of light onto a special mouse pad which has a grid of lines printed on it. The reflections from the lines allows the mouse to work out which direction the mouse has been moved in.

The stereo PCM signal and the original Yamaha audio are mixed together and both are fed to the monitor socket and the stereo phono sockets.

The Mega has the original Yamaha YM2149 sound system while the Mega-STe and TT have the same system as the STe. The Falcon of course has extra facilities in the form of the DSP chip. This allows real time digital manipulation of sounds and can produce virtually any effects required with the appropriate software.

Problems

The sound system is very reliable and usually gives no trouble. The Yamaha chip is readily blown however by spikes coming up the printer lead. The outputs are not buffered and so any nasty voltages on the printer lead go straight through to the YM2149 and blow it.

This lack of buffering also causes problems driving some printers, especially HP Deskjets and similar. The YM2149 was not designed to drive heavy loads along long cables and the result is intermittent garbage being printed especially when the machine is hot. The cure is to buffer the port with either an internal octal buffer chip and an external buffer box.

Alternative keyboards

The Atari keyboard, while giving a reasonable performance, cannot compete with high quality PC style keyboards. The AT Keys interface module from System Solutions allows the easy connection of any standard AT PC keyboard to an ST. The small box simply plugs onto the ST where the original keyboard went and the new PC keyboard plugged into the box. Similarly, the mouse and joystick are plugged into the box and a PC mouse can be supported as well. The unit requires no software to be loaded and works perfectly and transparently to the user - well worth considering especially if the ST is put into a tower case so as to require a separate keyboard. A top quality Cherry PC style keyboard can be bought in the high street or mail order for around \$35.

Addressing the YM2149

The YM2149 is controlled by two memory locations #FF8800 and #FF8802.

Location	Access	Description
FF8800	Read	Read Centronics data
FF8800	Write	Select register (0-15)
FF8802	Write	Write data to selected register



IMAGE



POSITIVE

24 Bit Image Processing for any Atari...

- ◆ Supports all ST, TT and Falcon screen resolutions.
- ◆ Allows the editing of 24-bit True Colour graphics on an ordinary ST!
- ◆ Compatible with GDOS, SpeedoGDOS, NVDI 3, GEM compliant graphics cards, ScreenBlaster, BlowUp030, virtual memory drivers, TT Fast RAM, Multi-TOS, Geneva, MagiC, MagiC Mac and Gemulator.
- ◆ Powerful block handling includes the choice of 11 different overlay methods with variable transparency.
- ◆ Supports the creation of 3D 'random dot' stereograms and foreground 'enhanced' stereograms.
- ◆ Uses the Falcon's DSP for processor intensive tasks and JPEG decoding.
- ◆ Outputs to most popular models of colour and monochrome dot matrix, inkjet and laser printers.
- ◆ Images can be rotated to any angle in clockwise and anti-clockwise directions, to an accuracy of one degree.

- ◆ Images can be rescaled up to more than 400% of original size without noticeable loss of quality.
- ◆ Images can be printed to disk if memory is low, then printed directly from the GEM Desktop.
- ◆ Numerous useful image processing filters are included, along with the ability to create your own.
- ◆ Supports 256 level (8-bit) masking. Includes a configurable gradient tool to aid mask creation.
- ◆ Allows processing of user defined areas (both regular and irregular) without affecting other parts of the image.
- ◆ Includes a number of localised retouching tools with full user configurability.

Positive Image requires at least 1 Mb of memory. A hard drive is recommended, though not essential. For a limited period, we are offering the package at an introductory price of just £65 (normal price £79) plus postage and packing (UK - £2.00, Europe - £5.00, rest of world £10.00). Payment in UK currency only - credit card or banker's draft preferred. Overseas customers, check first to see if we have a distributor in your country. A usable demo version is available from Floppyshop for just £1.00.

Floppyshop

PO Box 273,
Aberdeen AB9 8SJ

Credit Card Line Tel/Fax 01224 312756, Technical Helpline Tel/Fax 01224 586208



From HENSA we came...

Maurice Collins heads north to Lancaster University, home of one of the UK's best-known Internet software archives.



An interesting place to visit on the Internet, especially for Atari users, is HENSA - the Higher Education National Software Archive. Many 'Net surfers will already have made cyber visits but what is it really like? And what goes on there? I decided to make the journey north to find out...

HENSA is a Joint Information Systems Committee (JISC) funded service on the Joint Academic NETwork (JANET - the backbone of the Internet in the UK higher education community). It holds an archive of PD and shareware software for the benefit of on-line users on JANET. Others not in this category can use the archive albeit with some restrictions. With software available for the Atari, Amiga, Archimedes, Mac and PC, HENSA/micros is very much a one-stop shop for all your PD software needs although they don't hold fonts or games. Lancaster University supplies the room, the power, the stationery and the Internet link. UNIX software is held at its sister site, HENSA Unix, at the University of Kent.

What purpose does HENSA serve?

added service to on-line software seekers in higher education," added Denesh Bhabuta, the Atari and Macintosh sections moderator. "We tend to evaluate what goes on-line. Software is tested for viruses, although we can't guarantee that the software will be virus free. Each piece of software is documented so that the users can decide whether the gargantuan file they are contemplating downloading is really worth it. We also strive to keep access methods to the archive up to date." The directory structure is somewhat different to other archives, with each program stored in its own package code directory. The combination of the index files and the newsletters which you can subscribe to makes HENSA/micros very easy to use. In addition, the Gopher and Web interfaces work very well and remove the need to know what package a certain program is in.

Each package code directory contains the archived program itself along with a *.MSG file. This lists the author and program details, keywords, what operating systems, software and hardware requirements are, and a brief description of the program.

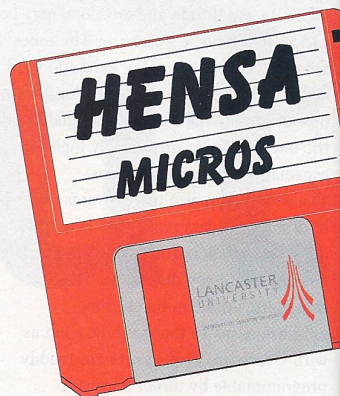
Joseph Hutcheon, the JISC Secretariat Officer commented, "JISC funds HENSA because it provides a useful way of enabling novice users in particular to access software." The team of four at HENSA/micros provide a value

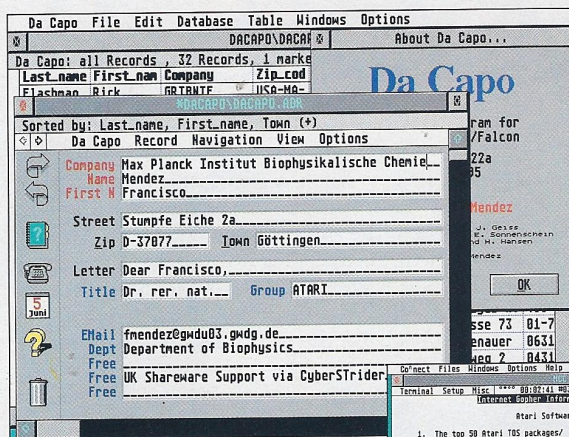
Community service

You may occasionally find an *.RVW file which contains a review of the software, usually sent in by a user of the service. This provides a second viewpoint (other than that of the enthusiastic author). Also found occasionally is a *.BWR file, a beware file, which contains a report about some non-pleasing aspect of the software, such as a particular bug. These too are usually sent in by users of the program. HENSA/micros encourages users to send in review and beware files which adds to the service that HENSA provides. This in some ways increases the feeling of community on the Internet where everyone helps each other.

Bhabuta, himself a very enthusiastic Atariian - and a fellow Atari World contributor - trawls the Internet everyday looking out for new and interesting software to place in the Atari section. He liaises with people at other software sites and keeps an eye out for announcements about new programs made on Usenet, the Internet conferencing system. Many programmers themselves make HENSA/micros one of their primary upload sites. Even the UK shareware support schemes, such as Joe Connor's InterActive, lists HENSA/micros as a site on the Internet to get the latest versions of software it handles.

HENSA strives to provide a solid and reliable service for non-computer literate users in higher education. Atari users can feel content knowing that the Atari section is in good hands. With many new files appearing constantly, who says the Atari scene is dead? Certainly not HENSA...





Da Capo - an example of a commercial quality address database downloadable from HENSA/micros.

The Team

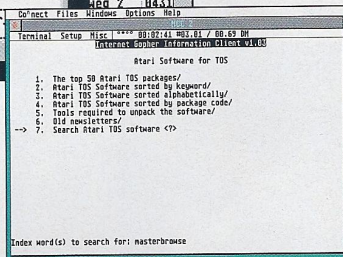
Four people work together to keep HENSA/micros running smoothly. Alan Philips is director of policy and Iain Fothergill is the technical manager and systems programmer. Dave Ingles, the PC moderator, also takes care of the World Wide Web interface and presentation material. Denesh Bhabuta looks after the Atari and Macintosh side of things, plus the hotline, mailing lists and toolkits.



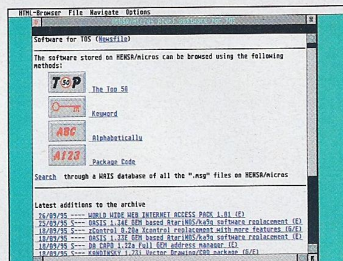
From left to right, Iain Fothergill, Denesh Bhabuta and Dave Ingles.

Follow the index

HENSA/micros index files are easy to follow, giving a lot of information. A typical entry (from the TOS section): p058 18/09/95 S— DA CAPO 1.22a Full GEM address manager (E) This tells you what package code the program is held in and the date it was made available on the archive. The 'S' denotes that it is shareware and there's also the name and version of the program, a short one line description and the language it is in (English in this case). The package code tells you where the file is held: in this case, it is in the path micros/atari/tos/p/p058/. If the package code was a165 from the Falcon index, the path would be micros/atari/falcon/a/a165/. Two types of index are available: index.key sorts the index according to keywords, and index which is an index in ascending package code order. You takes your pick...



Searching for files by keyword under Gopher.



The Atari platform now has an on-line browser.

News at 10

Anyone in the UK can subscribe to the newsletters mailing list. These include a list of recently uploaded software, along with brief descriptions of each and where they are held. There are three newsletters of interest to Atari users, atari-tos, atari-mint and atari-falcon. To subscribe send an email to archive-server@micros.hensa.ac.uk. The message should contain the lines: subscribe (list) "your real name". For example, subscribe atari-tos "Maurice Collins".



This is the nerve centre that looks after the Atari files - Denesh Bhabuta's desk.

Contact

Email: hensa@micros.hensa.ac.uk
Hotline: 01524-594287

How to get there

You can access HENSA by the following methods. UK academic users have free access at all times, but others are subject to restrictions.

FTP address: micros.hensa.ac.uk

Username: ftp

Password: your e-mail address

Restrictions: 8pm-8am - 10 logins

Comments: ftp is the most commonly used protocol because of the fast download speeds coupled with the flexibility of an interactive session, ie browsing the file store. You can use wildcards to download files. Due to the way the file store is structured, downloading via ftp is only viable if you know where the files are held. The indexes and newsletters make this as painless as possible.

TelnetAddress: micros.hensa.ac.uk

Username: hensa

Password: hensa

Restrictions: None

Comments: Telnet lets you move around the file store and view files on screen. This includes searching the index with various commands. You can then download files using the Kermit.

Mail server

Send mail to: archive-server@micros.hensa.ac.uk

What to send: Type HELP as a command, to receive a set of instructions. No username or password

Restrictions: UK users only

Comments: This method takes a while for your request to be processed. You send commands to the mail-server which processes requests overnight. Files are sent UUEncoded which have to be decoded at your end (software to do this on the Atari is widely available). Large files get split and sent as a series of 32K messages which have to be joined and decoded at your end.

GopherAddress: micros.hensa.ac.uk

No username or password required

Restrictions: Access between 8pm-8am only

Comments: A very popular method of downloading files. A variant of ftp it is just as fast for downloading, and presents you with a hierarchy of menus doing away with the underlying filestore structure. You can view text files on-line and even search for files by entering keywords.

World Wide Web URL:

<http://micros.hensa.ac.uk/>

No username or password required

Restrictions: Access between 8pm-8am only

Comments: By far the easiest way of accessing files from HENSA. You can browse the web with a text interface, a bit like Gopher, or with a graphical interface. Both allow you to browse and search the archive interactively. The graphical interface lets you download files using mouse point and click movements.

Dial-up Number: 01524 843878

Username: hensa

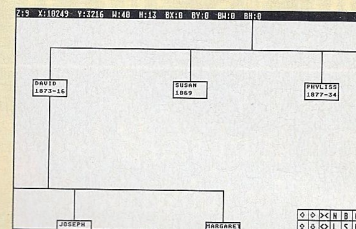
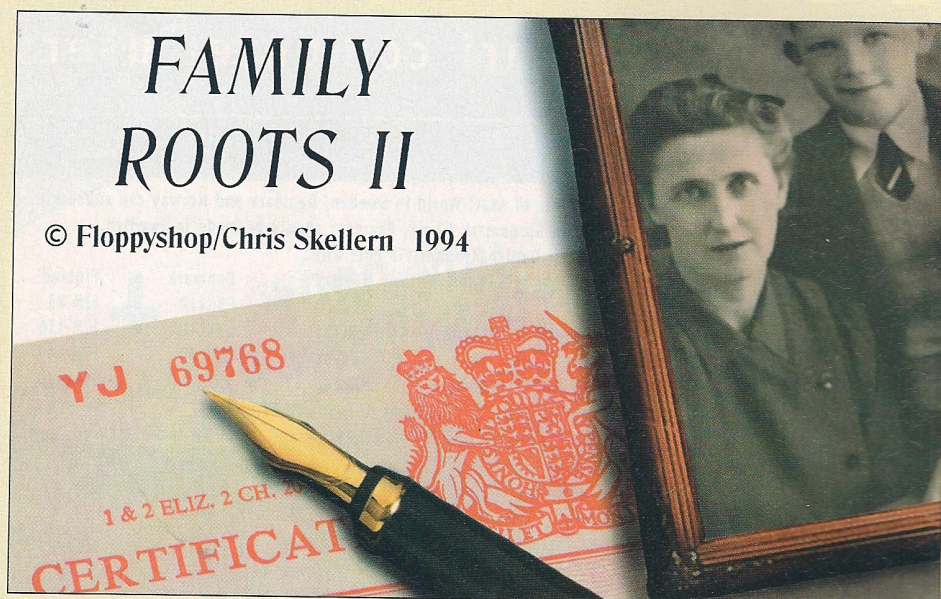
Password: hensa

Restrictions: 8pm-8am only

Comments: Accessing directly via modem is the same as accessing via Telnet.

Family Roots II

Family Roots II is an aid to those researching their family tree. Genealogy is a subject which intrigues most of us but a shortage of professional software and in some cases, extortionate prices, puts most people off getting started. The combination of five years' accumulated work (which has included extensive research into the subject) combined with a tempting £25 price tag, makes Family Roots II the ideal choice for the professional genealogist whilst keeping it within the price range of the amateur. For those who are not familiar with the original release, Family Roots is a program designed to assist those of us who indulge in the pursuit of tracing our ancestry or 'family tree'. Unlike similar products, Family Roots is not merely a customised database. It allows the user to link each individual into the family tree graphically on the workscreen, whilst allowing easy access to its integrated database where the information on each individual is stored.



BROTHERS/SISTERS		
Name: PETER SAMUEL WOODBRIDGE	Born: 15/12/1855	View Zoom
Name: RICHARD DAVID WOODBRIDGE	Born: 7/6/1852	View Zoom
Name: JACK WILLIAM WOODBRIDGE	Born: 2/2/1844	View Zoom
Name: MURREEN WOODBRIDGE	Born: 19/11/1847	View Zoom
Name: DOROTHY WOODBRIDGE	Born: 19/11/1847	View Zoom
Name: _____	Born: _____	View Zoom
Name: _____	Born: _____	View Zoom
Name: _____	Born: _____	View Zoom
Name: _____	Born: _____	View Zoom
Subject Search New		

Our popular custom written mouse driven interface makes the program easy to use for the beginner, whilst giving access to more powerful features needed by experienced genealogists. Another unique feature of our software is that new individuals can be added to any part of the tree. In other words, you do not have to define a starting point and work forwards. You can add new individuals anywhere within the tree structure and all existing data is cross linked to take into account the new individual's relationship to everyone else in the tree. You can even start an unlinked tree on the workbench, which is separate from the main tree and link it in when you have completed your research and found out at exactly which point it fits in. A powerful search function allows fast cross referencing between individuals.

Family Roots II is fast and extremely economical in use of both memory and disk space. This in part is due to the fact that it is written in 100% assembly language. It is envisaged that an average user with a 520 ST will be able to store details of 100,000 individuals on a double sided disk! We have several users who already have over 2,000 individuals entered into Family Roots.

Marriage No: 1	Date of marriage: 11/7/1927	Date of divorce: _____
☒ Civil Other	Place: ST. ANDREW'S CHURCH	Parish: ST. ANDREW
District: _____	Town: IPSWICH	County: SUFFOLK
Forename: HANNAH	Surname: MEDLOCK	
Hid name(s): _____	Children: 4	Flags: A B C D E F
Born: 5/4/1909	Place: _____	Parish: ST. ANDREW
District: _____	Town: IPSWICH	County: SUFFOLK
Died: _____	Place: _____	Parish: _____
District: _____	Town: _____	County: _____
Died: 8/2/1964	Place: _____	Parish: _____
District: _____	Town: IPSWICH	County: SUFFOLK
Subject Next Children Create Delete Search Define ID Link		

PARENT DATA	
FATHER...	
Forename: ANDREW	Surname: WOODBRIDGE
Born: 10/7/1879	Place: _____ Town: ELY
Died: _____	Place: _____ Town: ELY
MOTHER...	
Forename: MARGARET	Surname: SMITH
Born: 11/6/1882	Place: _____ Town: NORWICH
Died: 8/3/1952	Place: _____ Town: IPSWICH
Subject View Parents	

SEARCH	
Name: HARRY JACK WOODBRIDGE	Born: 12/4/1795 View Zoom
Name: DOREEN WOODBRIDGE	Born: 19/11/1921 View Zoom
Name: MIRIAM ANNE WOODBRIDGE	Born: 19/11/1921 View Zoom
Name: HENRY MAY WOODBRIDGE	Born: 13/5/1902 View Zoom
Name: HARRY WOODBRIDGE	Born: 15/2/1904 View Zoom
Name: DAVID STEVEN/SON WOODBRIDGE	Born: 12/5/1909 View Zoom
Name: HARRY/MARIE WOODBRIDGE	Born: 19/12/1926 View Zoom
Name: MARK WOODBRIDGE	Born: 11/1/1910 View Zoom
Entries to search: 118	Entries Searched: 118 Entries found: 105
CATEGORIES: ☒ Civil ☐ Marriages ☐ Misc. ☐ SEARCH WHEN: ☐ ON ☐ OFF SPEED: ☐ FAST ☐ SLOW	
Scroll Scroll Subject Marriages Misc Print Search Screen	

Family Roots II is a major upgrade on the original release and has already become the leader in its field. The package comes with an easy to follow fully illustrated manual and supports print out to 9-pin, 24-pin, Bubblejet, Deskjet and Laserjet printers. Family Roots II is available now for £25 + P&P (UK free, Europe £1.50, rest of world £3.00). A usable demo version is available for only £1.00. Overseas customers please note that payment must be made in UK currency (cheque drawn on a UK bank is recommended).



Floppyshop

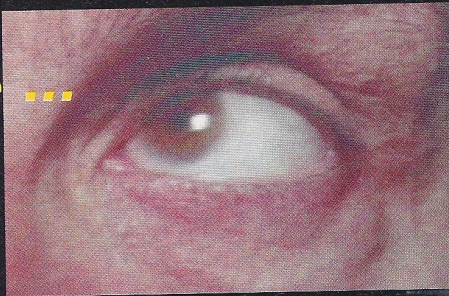
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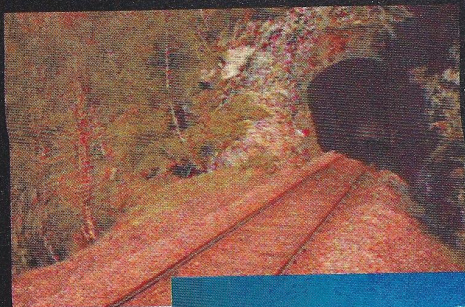
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Tech Spec

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- Interface - Falcon bus

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☒ No "FN"s in libraries	☐ Pause checks
☐ Suppress default window	☒ Stack checks
☒ Underlines in variables	☒ Variable checks

Array checks Max

Output to File name: _____

Pre-tokenised file: _____

```

BASIC-2 File Edit Search Block Options Program Tools
E:\SOURCE\FORMWIND.BAS
Line: 3 Col: 1 Mem:40721
'constants for list objects
CONST H_UP=0,H_DOWN=1,H_DRAG=2,H_PAGE=3,H_BOX=4,H_MAX=5,H_COUNT=6,H_A

DECLARE SUB form_pos(x,y)
'DECLARE SUB StartWinMenu(BYVAL menuaddr&,BYVAL title)
'DECLARE SUB TextRedraw
DECLARE SUB ProcessToolbars(BYVAL aes_win,BYVAL tool,BYVAL clicks,BYV
DECLARE SUB OpenTearMenuWin(BYVAL treeaddr&,BYVAL title,BYVAL closepro

SUB AlignToolbarMenu
    SHARED woMenuTree&(1),woToolbarTree&(1),woBaseX(1),woBaseY(1),woOffx(
    SHARED woObjectTree&(1),woCancelObj(1),hgt_font_h,common1,commonhandl
    STATIC workx,worky,workw,offy,box
    offy=0
    junk=wind_get(commonhandle,Wf_WORKXYWH,workx,worky,workw,junk)
    IF woType(common1) AND woTmenu THEN
        tree&=woMenuTree&(common1)
        Setob_x 0,workx
        Setob_y 0,worky
        offy=hgt_font_h+3
    
```


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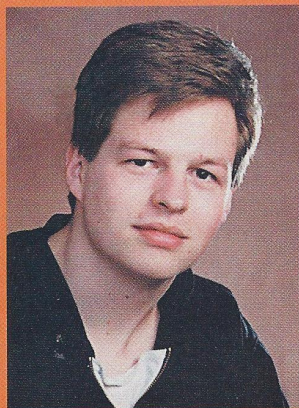
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Rebirth

Timeworks might be a little long in the tooth but it's still one of the best budget DTP programs around - and one that's in demand by *Atari World* readers. Its biggest drawback has always been its poor font handling and with the likes of Calamus and Pagestream dropping in price, this flaw has been more and more obvious.

All that has changed though - the previously unreleased Timeworks version 2.04 has now been made available exclusively through *Atari World* - and it works with scalable font systems like SpeedoGDOS and NVDI 3.0! Now you can use as many fonts and point sizes as you like and really get on with designing superb documents!

This new ability to team up with SpeedoGDOS or NVDI 3.0 has breathed new life into Timeworks 2 and over the next four pages we'll show you how to upgrade an existing Timeworks 2 installation and use it with Speedo, PostScript or even TrueType fonts. Once you've mastered that, Günter Minnerup has some excellent advice for those of you wanting to design some basic business stationery using Timeworks 2.

Next month Ofir Gal will be visiting the ST Source section to bring you a detailed tutorial and get you up and running with HiSoft BASIC 2. Remember, the package will be free to subscribers, so why wait?

Nial Grimes, features editor

Scaling new heights

Sick of being straight-jacketed by Timeworks' lack of point sizes? Itching to use some real quality type?

Andrew Wright shows you how to get Timeworks working with scalable fonts, courtesy of SpeedoGDOS and NVDI 3.0.

If you've got Timeworks 2 up and running, you'll already know how good it is. On the other hand, the chances are high that you've already come up against the limited font support problem. Limited font support? Not half - even if you have a hard drive and managed to install the entire range of fonts, you'll have noticed how few point sizes there are. It's a problem that's particularly acute when you want to add medium sized text such as that used for titles and subheadings or when you want some really big, attention grabbing headlines. Even when you're working with normal text sizes, it would often be nice to have 11 or 13 point text, wouldn't it? Not only does this give you design flexibility, it lets you increase the text to fit the space available.

If you switch to Timeworks version 2.04 - along with one of the font scalers mentioned - the restrictions will disappear. Need a 33 point headline to fit across the page? Perhaps you need some 7 point text for complicated form? Or perhaps you want to use some more adventurous fonts or a really high quality typeface for your business letters? It's no problem with Timeworks 2.04.

You will also get much better results with Timeworks 2.04 than you would with Pagestream or Calamus because they don't use hinted fonts (SpeedoGDOS and NVDI do). In fact many experts acknowledge that the Speedo font format is the best in the world, and technically way ahead of TrueType and PostScript. The Speedo rasterising process is also much quicker and this is one reason why many laser printers use Speedo technology to rasterise fonts.

What you need

You need to have Timeworks version 2.0a from our original Issue 4 Reader Disks and you need to have it installed on your ST. You also need to have it installed on a hard drive. Although Timeworks works reasonably well on a floppy based system, a hard drive is almost mandatory with SpeedoGDOS and NVDI 3.0 because of the large vector font files. It might be possible to get a working setup on floppy but we doubt it. Even if you could, you would be severely limited in what you could do.

SpeedoGDOS needs 2Mb RAM and while NVDI is a little more efficient, 2Mb is strongly recommended. In effect then you need 2Mb RAM and a hard drive to have any hope of running 2.04.

If you don't already own either SpeedoGDOS or NVDI 3.0, you need to buy one or the other. SpeedoGDOS 4.x works only with Bitstream Speedo fonts so if you opt for this choice (see the advert on page 54-55) you will probably need an



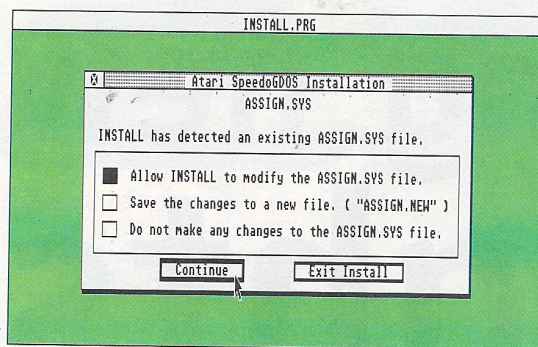


Figure 1

Allow the installation program to modify the ASSIGN.SYS file as you should already have backed it up (Figure 1).

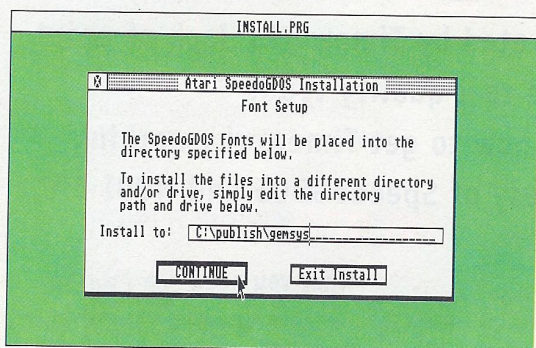


Figure 2

extra font pack as you won't be able to get Speedo fonts from PD libraries or CD collections.

Version 5.0 comes with the same Speedo fonts but offers you much more flexibility as you can use TrueType and PostScript Type 1 fonts from all kinds of sources. There is also a much better selection of printer drivers - including ones for the Deskjet 500C and 550C, the 600 dpi Laserjet, and the Epson Stylus.

NVDI 3.0 includes the built-in screen accelerator which is a useful bonus and it supports both Speedo and TrueType fonts. There is also a good selection of printer drivers.

Installing SpeedoGDOS 4.x

As an example, let's start by installing SpeedoGDOS 4.1. The first thing to do is to back up your existing Timeworks installation - this includes the ASSIGN.SYS file and everything inside the PUBLISH folder. Now install SpeedoGDOS as per the manual:

Now direct the Speedo fonts that are included with SpeedoGDOS itself to be copied into the PUBLISH/GEMSYS folder used by Timeworks for font storage (Figure 2).

Select a printer from the list. Be careful with this dialogue if you're using SpeedoGDOS 4.0 or 4.1 as it is a little flaky with a tendency to crash on some

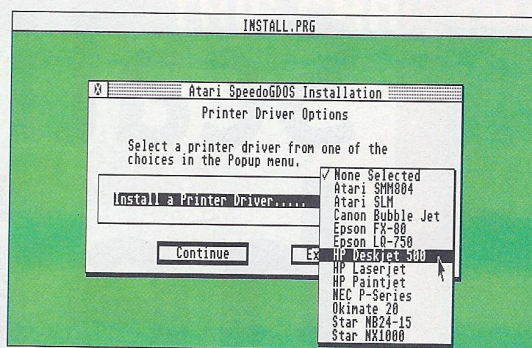


Figure 3

setups (well it crashes on mine anyway). Don't worry if it hangs - just reboot and start the installation process again (Figure 3).

If your printer isn't listed here's some advice. If you have a 9 pin dot matrix choose Epson FX80 and with a 24 pin printer choose the Star NB24-15 for 180dpi output or the NEC P-series for 360 dpi output. Do not use the driver called LQ750 - it is actually an LQ570 driver but contains a bug that crashes FONTWID.APP.

The next step is to copy across the replacement Timeworks files, the ones that constitute the upgrade to version 2.04. These are FONTWID.APP, PUBLISH.APP, DEFAULT.STY, PUBLISH.DEF, PUB_F5.OVL and PUBLISH.STR. When you're copying them across into the PUBLISH directory, make sure they replace the existing files. If you're using SpeedoGDOS 4.1 you will have to use a special DEFAULT.STY file provided on the release disk in a separate folder.

You will have to add at least one bitmap font to your ASSIGN.SYS file but this is dealt with in the accompanying panel (Bitmap bites back).

Now you are very close! Reboot your system (if you made the changes to the ASSIGN.SYS file) and run FONTWID.APP (Figure 4). You may get certain error messages. SpeedoGDOS produces a spurious error about FSMGDOS (the scalable form of GDOS was originally going to be called FSMGDOS) but you can safely ignore this (Figure 5). NVDI 3.0 will tell of unknown printer drivers - again just ignore it. Just carry on. You'll know when you're getting there because FONTWID will display messages such as "Processing scalable font id 4" and so on, which means it is reading and processing your Speedo or TrueType fonts.

You can also run NVDI 2.x or 3.0 in conjunction with SpeedoGDOS if you want the benefits of screen acceleration. However you have to switch off the GDOS element built into NVDI using the configuration accessory and ensure that NVDI runs first, before SpeedoGDOS.

Problems

Compatibility could be a problem when you upgrade because old documents will look very different when you install SpeedoGDOS or NVDI. The font spacing is different and the fonts themselves won't match either. You can, of course, have two different Timeworks setups if you have a hard drive but I much prefer to convert older files across whenever possible, if I use them as the basis for new projects.

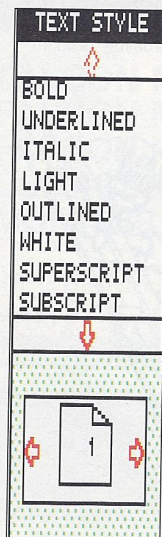
No matter how much care you take, things can get sticky. The screen display can get muddled and occasionally fonts don't look as they should. Symptoms of this problem are closed up or exaggerated spacing or fragments of previously erased characters cluttering up the screen. In most cases hitting the Escape key solves the problem.

Early versions of SpeedoGDOS - 4.0 and 4.1 - had problems with font ID numbers which was solved in 4.2 by assigning higher ID numbers to Speedo fonts. The number 5000 was added to each Speedo font ID. The end result is that if you use an early version you can sometimes get ID clashes.

This is the first release of Timeworks that will run on a Falcon without the need for MultiTOS to be installed. It will, however, hang when you run FONTWID.APP but only after it has done the business. Simply reset the machine and you'll be fine.

In general the Falcon screen display is more reliable but occasionally the file selector will refuse to go away when you press OK. Just press Escape to force a screen redraw and do a quick save just in case. Worst of all is that Timeworks will crash when you exit - you must always save your work first and then quit/crash. In fact this is a harmless bug but it's extremely unsettling!

Other problems can occur when using SpeedoGDOS with externally sourced TrueType and PostScript fonts. SpeedoGDOS 5.0 assigns them negative IDs and it can only be cured by editing the OUTLINE.DBL file. Not a task for the casual user, I hasten to add.



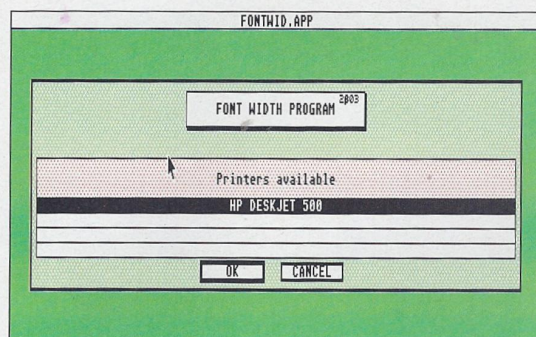
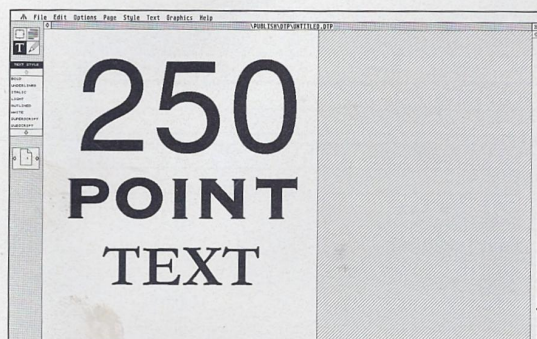


Figure 4



Figure 5

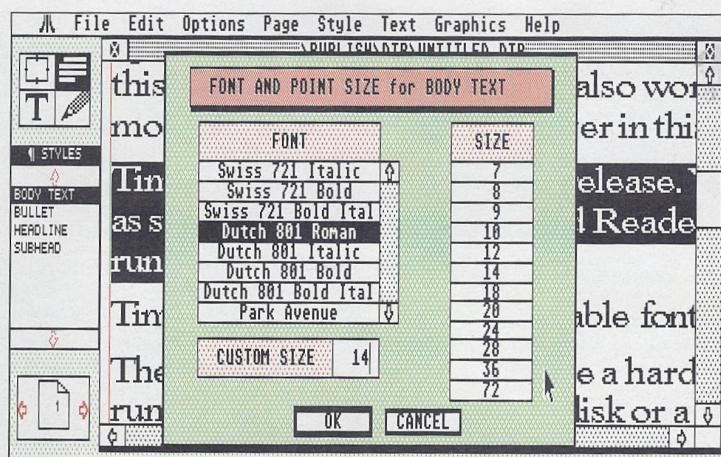


Timeworks at TT high resolution - you can grab plenty of attention with those headlines!

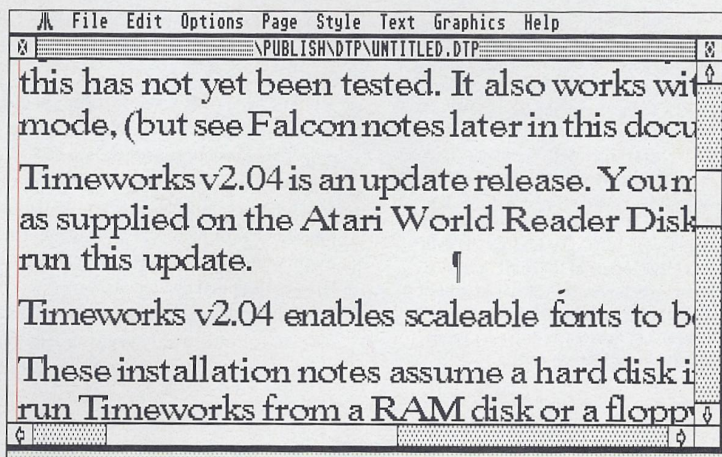
In general SpeedoGDOS 5.0 is more robust than 4.x and if you can stretch to it, it makes sense to buy this version. You can select any point size in 4.x but the program can subsequently crash without warning. It is best to use only the point sizes on offer.

One thing to get into the habit of doing is assigning fonts to the paragraph styles immediately after you select New from the menu and choose a New style sheet. If you don't tell each of the four main paragraph styles what font it should use, you will get bombs as soon as you try and do anything on the page.

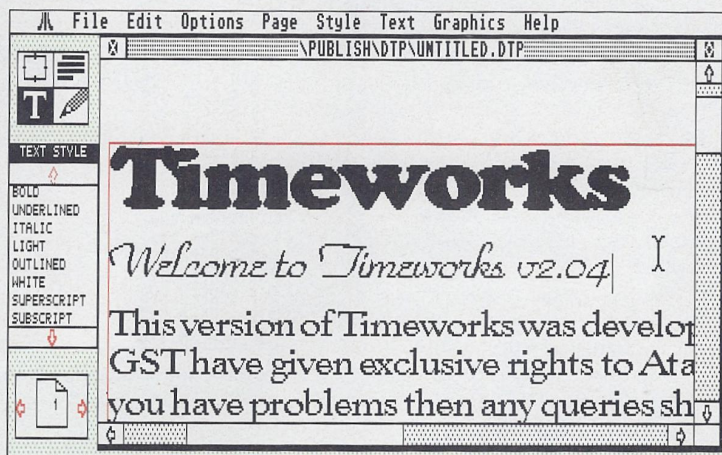
If all this sounds like a weary scenario, rest assured that either NVDI 3.0



Choosing a font - what a selection!

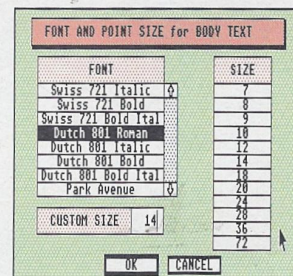


With Speedo installed the quality of the output is ten times better - on screen and on paper.



SpeedoGDOS and Timeworks gives you top class text and plenty of choice.

or SpeedoGDOS will breathe new life into one of the most successful and easy to use desktop publishers the Atari (and PC) platform has ever seen. The obstacles sound difficult when presented one after the other but the combination is actually very stable and well worth trying. As soon as you see the print quality and the amazing range of point sizes, you'll be hooked!



Check it out

Once you have SpeedoGDOS installed, it's worth checking that it's been done correctly. You can use GDOS CHECK from the issue 2 Reader Disk. It's a good idea to use a text editor to alter the line in the GD_CHECK.INF file from:

```
TitleFontName 'Typewriter'
to
TitleFontName 'Monospace 821'
```

This means that when you print successfully you get the details of the font in Monospace and not Wingdings.

Bite the bullet

Timeworks 2.04 uses Wingdings as its bullet font instead of the old bitmap font used by other versions of Timeworks. You may need to go back to using the old bullet font (for old documents, for example) and you can do this by editing the PUBLISH.DEF file.

This is an ASCII file and the last line gives the identification number of the bullet font. It should be set to 8219, the ID number of Wingdings but if you alter it to 129 - and ensure you keep the old bullet font ("ZDB" files) in the PUBLISH/GEMSYS folder - you'll have the old font back when you restart Timeworks. This doesn't apply to NVDI 3.0, however, as it doesn't get on with Timeworks' bitmap fonts.

The Font Collections

Gold pack

The SpeedoGDOS Gold collection is a handy collection of 100 Bitstream Speedo format fonts in 45 different typeface families. The collection is supplied as 12 disks shrink-wrapped in plastic with a thin piece of card listing all the included fonts. There is also a text file on the first disk with a list of which font is on which disk and another easing you into installations for both SpeedoGDOS and That's Write 3. If you're using other non-Compo programs, you'll have to work things out for yourself but you can also use them with NVDI 3.0.

The fonts are on eleven 720K disks with the twelfth containing a nice bonus, the under-rated image conversion utility, Studio Convert, that normally retails at £9.99. The fonts are present as files with the usual SPD and TDF extenders but there are also ready made PF files for That's Write users.

The Gold pack consists mainly of display and script style fonts, making it less useful for certain tasks like newsletters as there are very few good headline fonts but it is a great choice if you want to design more exotic pages. However, the inclusion of some good serif body text fonts makes it useful for those wanting to produce reports, letters and other business oriented documents.

When designing documents it is important to have a wide variety of typefaces from a single family so that headings, captions and body text don't clash.

The Gold collection includes good selections of Cooper (from Light to Black Italic Headline), Goudy Old Style and Bitstream's version of Optima, Zapf Humanist 601.

Office pack

The Office pack is very similar to the Gold pack though it consists of a completely different set of fonts, again a hundred in number, but this time split over just nine disks and a tenth with Studio Convert. The accent here is on formal and newsletter style documents with fewer flippant display and script style fonts.

Highlights include no less than 17 different typefaces in the Futura family and some stylish serif body text fonts. The latter include three variants on the classic face Caslon and Bitstream equivalents of two other well-respected types, namely Plantin and Bembo. There is also a good 11 strong set of Humanist 521 (better known as Gill Sans) and some trendier but no less useful fonts like Bernhard Modern and Copperplate Gothic.

The big problem with Bitstream fonts is that the files are numbered and not named, but as with the Gold pack, there is a text file on the first disk that matches the file number with the name of the font. Full marks to Compo for adding that.

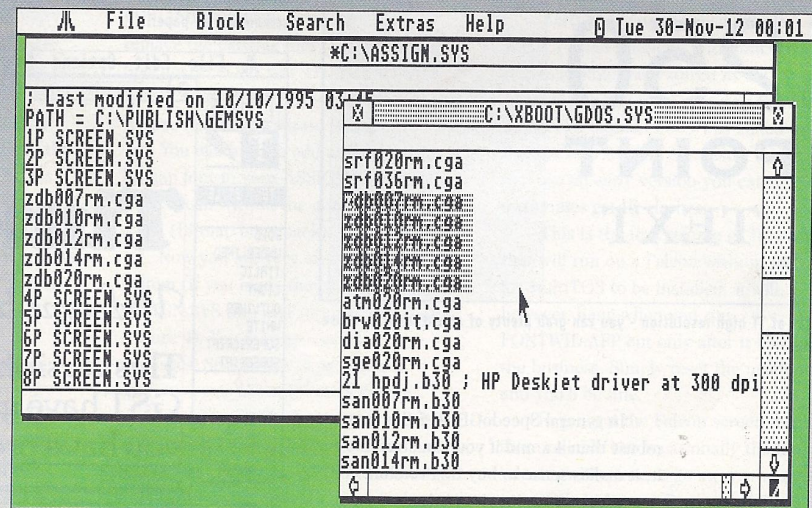
Bitmap bites back

Strangely enough, you can't get rid of all your bitmap fonts just yet. Apart from the fact that your existing documents might look a bit of a mess when you change to Speedo or TrueType fonts, the ASSIGN.SYS file must tell SpeedoGDOS to use at least one bitmap font because Timeworks 2.04 needs at least one to work correctly. There are ASSIGN.SYS files for most of the common installations on this month's Reader Disk so just copy across the one you need.

Alternatively, you need to cut and paste lines from the original (GDOS) ASSIGN.SYS file into the new (SpeedoGDOS) ASSIGN.SYS file.

The easiest bitmap font to use is the original bullet font. Look for any lines in the original ASSIGN.SYS file starting with "ZDB" - for example ZDB012RM.CGA or ZDB007RM.B30 - and note which output device it is listed under. In most installations a number of similar files are listed under the screen driver - SCREEN.SYS - and one or two under the printer driver. Copy these lines from the original and paste them under the same device drivers in the new ASSIGN.SYS file.

As far as NVDI 3.0 is concerned we have a problem. It will not support any of the original Timeworks 2 fonts at all yet Timeworks still needs a bitmap font to work properly. What can

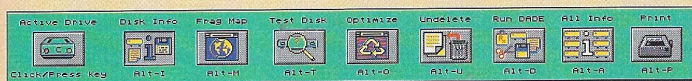


we do? The answer is subscribe to *Atari World* because on the Reader Disk this month we've included some bitmap fonts that will work. Screen and printer fonts are provided. All you have to do is copy them into the PUBLISH/GEMSYS folder and add them into your ASSIGN.SYS file in the correct place. If you don't have the Reader Disk, most old GDOS fonts will do (from Timeworks 1.x or other GDOS programs).

This text editor called Alice is ideal for cutting and pasting. Here the screen fonts have been pasted into the new ASSIGN.SYS file.

Incidentally this is also a good time to remove that horrible replacement system font for good - just delete all the lines that start "s MONACO" and reboot - the good old Atari font will be back in place.

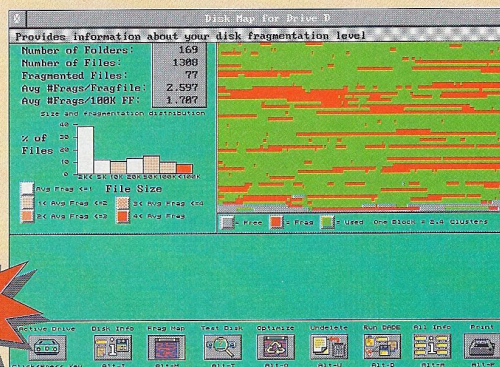
Diamond Edge 2 Ships!



Finally, the wait is over. The biggest upgrade to the best disk utility program ever is complete and is shipping *now*! Over two years of programming have gone into this Diamond Edge upgrade that *no* Atari owner should be without.

- Disk Diagnostics
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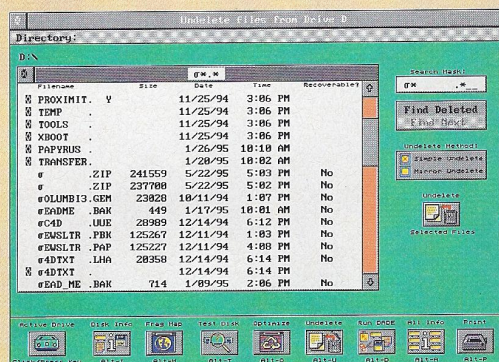


The Disk Fragmentation Map plus Statistics

Diamond Edge, the most popular and powerful hard disk management tool package for the Atari has undergone its first major overhaul in 2 years. New features include a streamlined, re-designed user interface, many new and enhanced functions, internal speed optimisations, plus new programs like Diamond Mirror 2 and Diamond Advanced Disk Editor (DADE).

Re-designed from the ground up with the user in mind, Diamond Edge 2 is the most advanced, easiest-to-use disk management system available for TOS computers. It is fully compatible with all Atari computers and disks, disk formats, TOS versions, and alternative operating systems like Multi-TOS, Geneva, and MagIX.

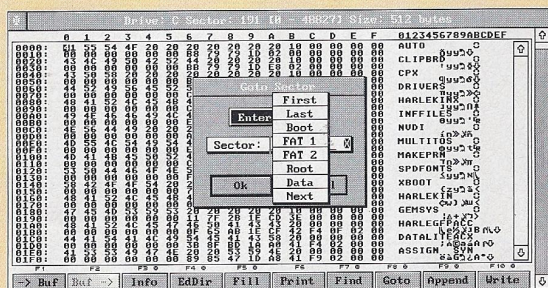
Protect yourself from data loss with Diamond Edge 2 at a great, value-for-money price; comparable software on other platforms costs over £100. Diamond Edge 2 is economical insurance against disk problems and data loss. You simply cannot afford to be without it! Upgrades include a completely re-written and expanded manual.



Diamond Edge 2; un-deleting files is a piece of cake

There are two types of computer users; those who have lost data and those that *will* lose data. Diamond Edge 2 creates a third ruling class: those that are protected from data loss! Your data is too valuable to be without the protection of Diamond Edge 2.

Diamond Advanced Disk Editor

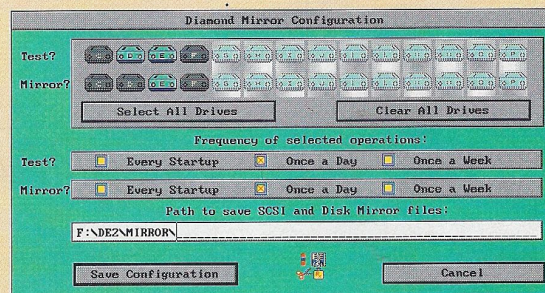


DADE - the powerful disk editor included in Diamond Edge 2

There are other disk editors, but none as powerful, flexible, and easy to use as DADE. Specifically designed with time-saving and impressive features to aid any editing or recovery effort, there is *no* other disk management system that offers as much, including Physical Device Level Disk Editing. The ultimate in data recovery and low level power tools.

- Edit physical disk sectors, logical disk sectors, or files. Supports all Atari disk formats and sector sizes.
- Cut/paste buffer.
- Drive Info window. Includes locations of key disk structures.
- Easy navigation around the disk with a pop-up GoTo function. Special function to search for lost directories.
- Easy to use edit window with Offsets, Hex, and ASCII displays.
- Convenient function button bar. Many with special time saving features when double-clicked.
- Easy-to-use Directory Edit window decodes the information for you with a trace feature for FAT entries for a file. Very nice!
- Flexible Fill function.
- Powerful search and replace function.
- Rebuild lost files sector by sector.

Diamond Mirror 2



The Diamond Mirror Configuration dialog

Diamond Mirror 2 (use regularly to 'snapshot' your drive) has been greatly enhanced to include complete testing of disks at boot time as well as keeping backup copies of Mirror Files.

Upgrades ➔

Upgrades from version 1 of Diamond Edge cost only **£29.95** - just send your master disks back with your remittance. Silver or Gold support customers can order over the phone with a credit/debit card - please call for details.

Order Hotline

0500 223660

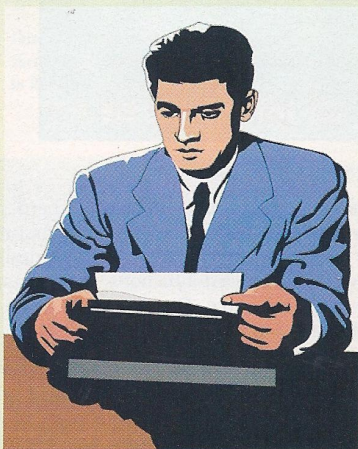
To order the brand-new Diamond Edge 2 package (or any other HiSoft product, just call us, completely free of charge, on **0500 223660**, armed with your credit or debit card; we will normally despatch within 4 working days (£4 P&P) or, for only £6, by guaranteed next day delivery (for goods in stock). Alternatively, you can send us a cheque or postal orders. All prices include VAT. Export orders: call or fax to confirm pricing and postage costs.

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Just the business



Making a good impression is essential to a successful business, and well-designed company stationery gets you off to a flying start. And all this for next to nothing using Timeworks DTP and some common sense as supplied in Gunter Minnerup's hands-on tutorial.

Let's start with some realism: if you were running a multi-million pound corporation with thousands of employees, you'd hardly be sweating over a hot Atari running Timeworks to produce your letterheads, compliment slips, invoice forms and business cards!

So what we are talking about is a very small, probably one-person, business such as a small retail shop, a family hotel or a service of some sort. In this tutorial, we'll design and produce basic business stationery for a home-based typing service, such as those aimed at authors of theses and dissertations. It might even inspire you to make some money out of your computing and word processing skills!

It is just as important for mini enterprises such as these to make a favourable impression as it is for the big business boys. Perhaps even more so, since a tiny kitchen table operation really needs to assure potential customers of its professionalism: poor letterspacing or typos on its business card would hardly reassure the author of a doctoral thesis that his or her work is in safe hands...

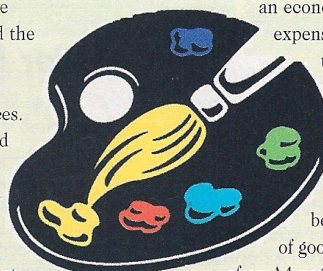
On the other hand, there really is no need for fancy over-design, multi-colour graphics or imagesetter quality as all that is required for such jobs is monochrome clarity and accuracy at typical laser output resolutions.

A laser printer is therefore what we are aiming for. A good quality Deskjet would also do, provided decent paper is used to reduce the tendency for the ink to

be absorbed and blur the letter outlines, but dot matrix printers are not really up to the job. Other than access to such a printer - without which our typing service could hardly function anyway - the only other hardware required is an Atari computer and a guillotine to cut the printed output. For software, Timeworks DTP is the only program used. You could, of course, employ scanners and powerful graphics packages for special effects, but Timeworks is quite versatile enough to do a more than competent job - as you are about to find out.

Corporate identity

First, some basic design considerations. Big businesses spend serious money on acquiring a "corporate identity" - all that really means is a unified style for all corporate publicity and a striking, easily remembered logo. The same should be done for our modest outfit: the letterhead, the invoice form, the compliment slip and the business card must employ identical imagery and typefaces. The simplest method of designing a logo is to type out the business name and then play around with it, using different typefaces and making liberal use of such special effects as subscript and superscript, kerning, inverted type, frame background



tints and borders. Owners of the Timeworks 2 upgrade capable of handling scalable Speedo fonts have a distinct advantage here: standard bitmapped GDOS fonts can only be used at certain preset sizes without ugly distortions.

The typeface used for the business address and other essential information - bank account, VAT number (if applicable) and so on - should fulfil two requirements: it should be distinct from the standard correspondence font used in letters, invoices and other messages, but it should also be clearly legible - you don't want your customers to ring the wrong number or pay money to the wrong account, do you?

Study "professional" examples of business stationery in your possession for ideas concerning basic page layout to decide what you like and what would work for your purposes: the very formal centred design, asymmetric arrangements, or even outright eccentricity like running everything vertically along the left or right margin. Eccentricity, however, is not for beginners so we shall adopt a fairly conventional, solid look for our "ABC Typing Services".

Saving trees

The second important consideration before diving into the job is very practical. With paper prices being what they are these days, an economic page layout is desirable in order to avoid expensive and ecologically unsound wastage. Keep in mind that much of your stationery will be mailed and therefore needs to fit into standard business envelopes.

For the letterheads, the choice will be straightforward A4 in most cases, but invoices, compliment slips and business cards may be much smaller. A small business with a limited range of goods and services will rarely need more than two-thirds of an A4 page to detail the items charged, and this format has further advantages: it is easily folded to fit a standard business envelope, and leaves another third of the page in our Timeworks layout for compliment slips - the guillotine taking care of

separating the two once they are printed.

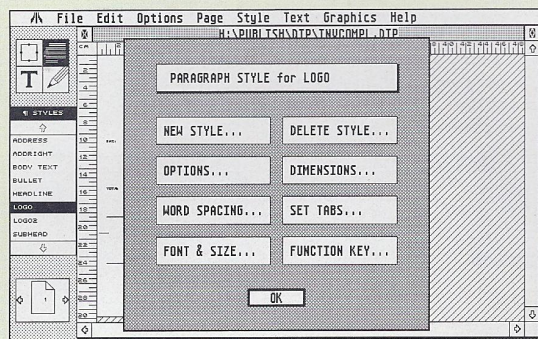
The only unavoidable wastage will occur with the business cards: as these are best kept to the standard credit card format of about 8.5 by 5.5 centimetres, some trimming around two edges of the printed A4 sheets will be necessary but this is a small price to pay for a yield of ten cards for each sheet. It is also a good idea to use somewhat stiffer than standard stock for the cards - consult the manual as

to the maximum weight your printer will accept without jamming.

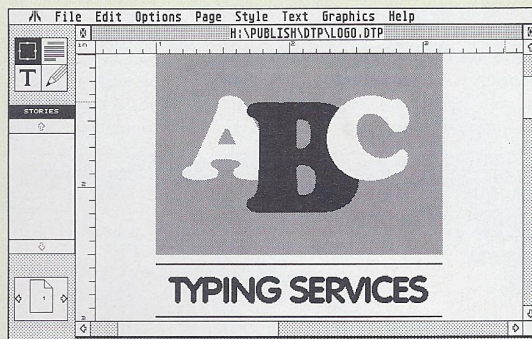
Keep it simple

Above all, resist the temptation to clutter your stationery with a multitude of fonts, graphics, borders and more information than is strictly necessary. Overdoing these things is the sign of the amateur getting carried away by his excitement over all

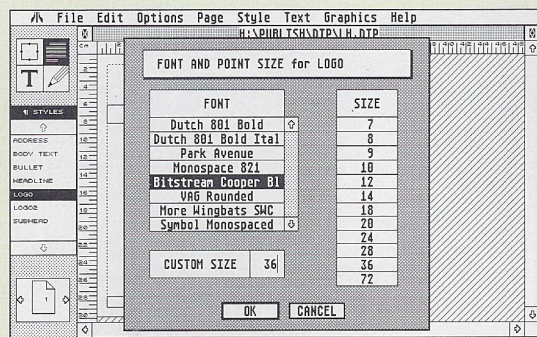
the features available. Once you have a working design and you are confident about your abilities, you can always introduce gradual refinements, such as a new logo redesigned with a capable graphics package and imported into Timeworks as a picture file, or more ambitious typography. But for now, your best bet is to keep it simple.



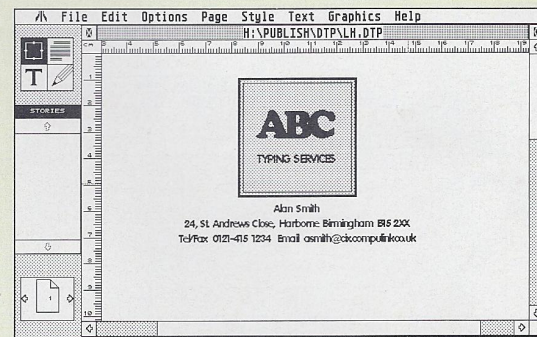
Styles are a key concept in Timeworks DTP, and particularly important for our project where consistency over the whole range of stationery is desired. Defining all the main styles must be our first task, so that they can be saved into a style sheet to be used whenever a new document is created. This is the only method of copying styles between the letterhead, invoice/compliment slip and business card documents.



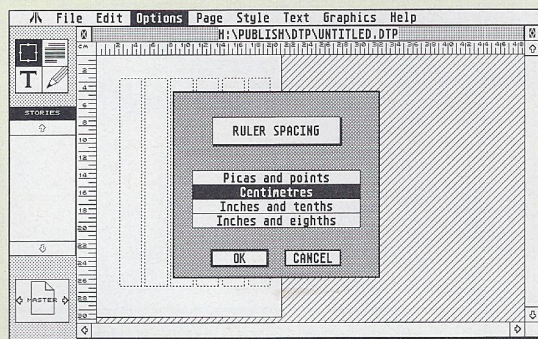
Logos are perhaps best designed with a graphics package and then imported into the document, but quite a lot can be achieved within Timeworks itself as this examples shows. The letters A and C are white superscripts, and all three characters were made to overlap by liberal use of negative kerning. Unfortunately, Timeworks did not manage to cut and paste this across documents intact, so a simpler version was eventually adopted.



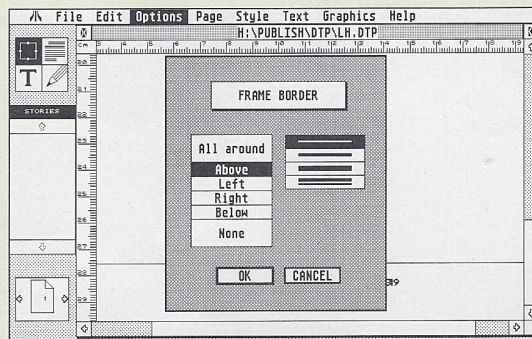
The browser box on the left of the working window displays the available paragraph styles when in Paragraph mode - which is selected by clicking on the top right of the four icons above the browser. For our business stationery, we create three new styles: Logo and Logo2 for the text elements in the ABC Typing Services logo, and Address for the other information such as the business address and bank account details.



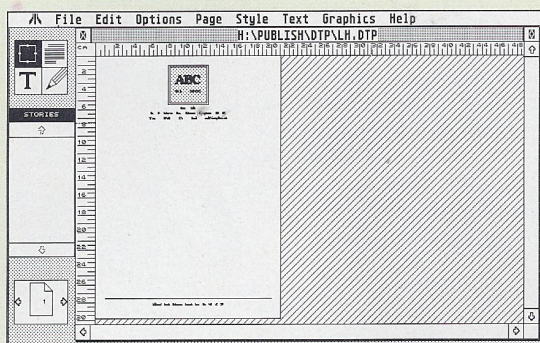
This logo employs no fancy effects except for the grey background tint and the border assigned to the text frame. Three different text styles were defined for this letterhead: Logo1, Logo2 and Address, and saved as a style sheet to be able to copy the various elements to the other documents via the clipboard. You have to be in frame mode rather than text mode, of course, to copy the entire logo complete with tint and border.



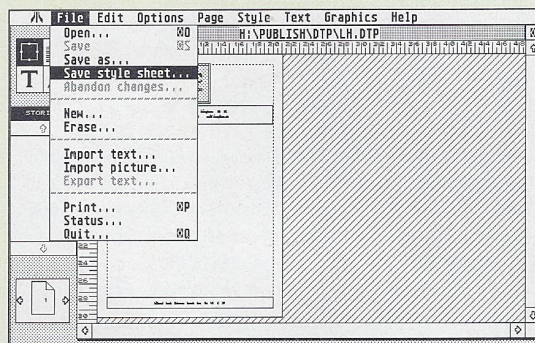
The calibrated rulers at the top and left edges of the working window are indispensable for precise work, so don't forget to enable them. The choice of measurement unit is up to you, but picas and points are strictly for the experienced designer and since wholesale decimalisation is imminent anyway, you might as well go for centimetres.



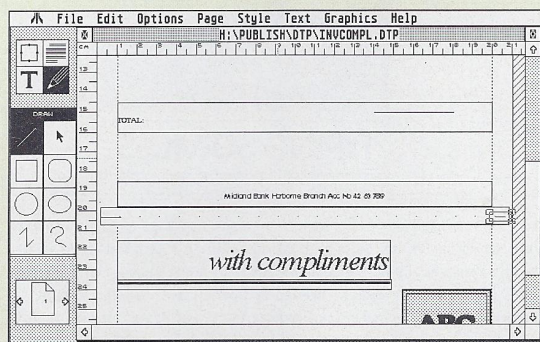
Rather than draw graphical elements such as rules and boxes in a separate graphics frame, it is often easier to use the frame borders offered in the Options menu, as I did here for the rule running over the banking details at the bottom of the letterhead page, and indeed for the logo frame.



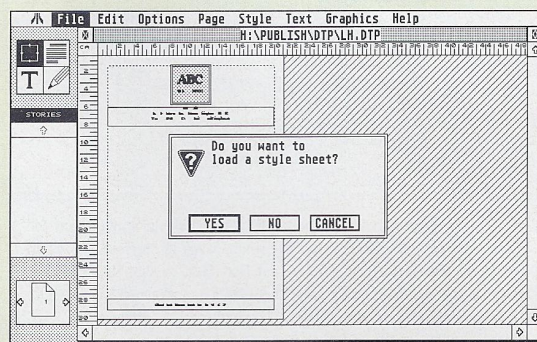
The finished letterhead page, with frames and guides disabled. You could add further bits such as a framed address space or "Date:" and "Reference:" prompts, but for our small operation that would be over-elaborate. Make a note of the dimensions of the white space between the top and bottom elements to set up a accurate printing template for your word processor.



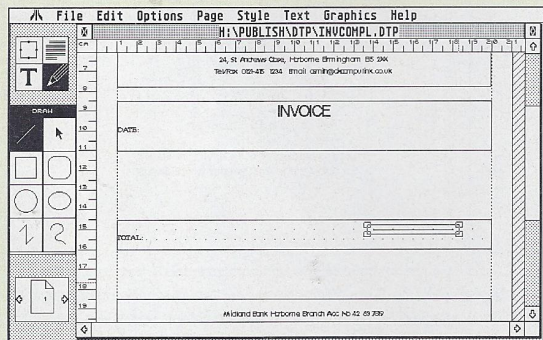
With the letterhead page finished, all the paragraph styles created for this page are saved to a separate style sheet file with the .STY extender. If you have defined a master page for your document, all graphics and text on that master page are saved to the style sheet as well, but that is only really necessary for multipage documents such as newsletters.



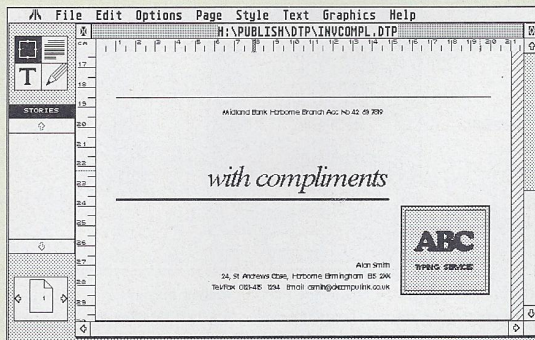
To ensure that invoice and compliment slip are separated cleanly and consistently, crop marks are added in the left and right margins. Do not simply draw a line across as this would show up on one of the items, or even both.



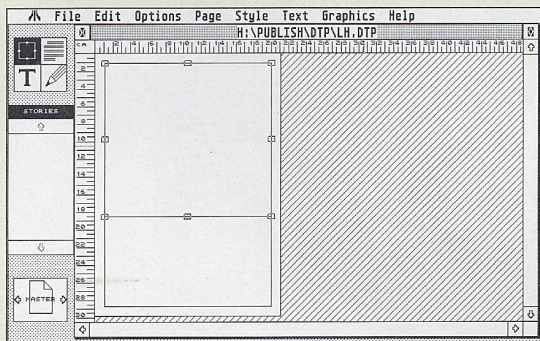
When you click on "New" in the File menu to start your new document for the invoice and compliment slip, Timeworks asks if you wish to load a style sheet. Answer "Yes" and select the *.STY file saved for the letterhead page to have all the previously defined paragraph styles available.



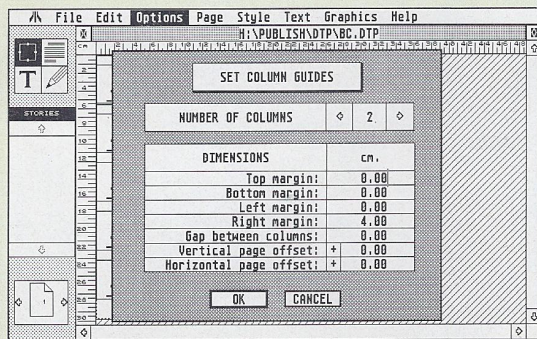
The invoice forms of larger businesses often feature complicated column grids for part numbers, VAT and so on for a number of different items, but a tiny outfit such as this one will rarely send out demands for more than one job at a time, so all that is needed is space for the date and somewhere to specify the total due, all other details to be filled in by hand.



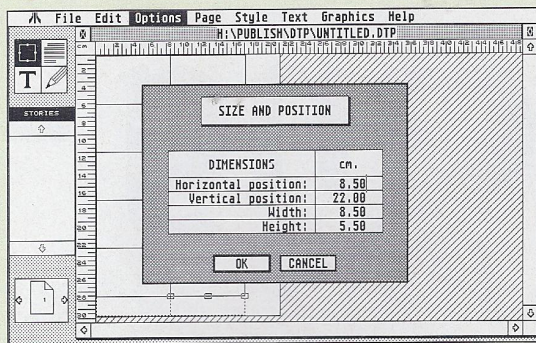
The finished compliment slip, leaving just enough white space for adding hand-written comments or greetings when necessary. Just cut beneath the bank account details at the foot of the invoice form above!



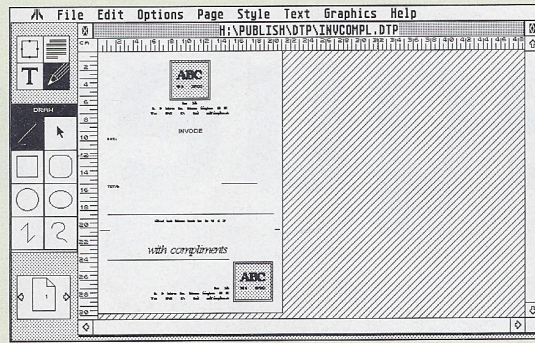
For reasons of economy, the invoice and compliment slip share one and the same page: the invoice taking up two thirds of A4 for a simple fit into a standard business envelope with one fold, and the compliment slip the other third. A master page and these outline frames are not really required but help visualise the best approach during the planning stages.



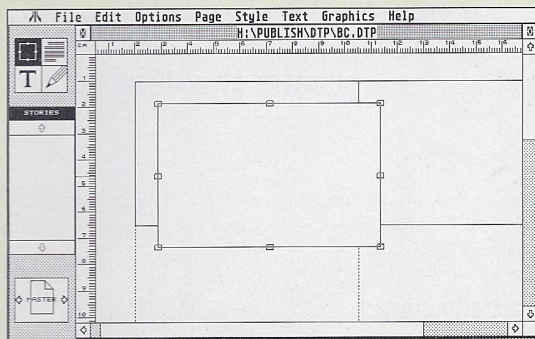
When starting a new document for the business cards and loading in the style sheet from the letterhead, it is important to change the column guide settings. Two columns are needed because we can fit two cards side by side, and the gap between them should be zero to reduce the amount of cutting required. Here, the top and left margins have also been zeroed while the right margin of 4 centimetres was calculated using the formula: horizontal page width minus two card widths.



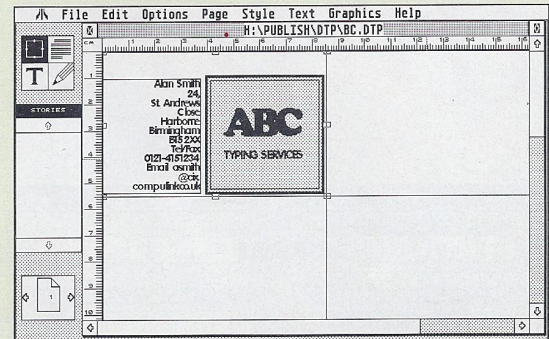
Although most printers cannot print on the entire surface of an A4 sheet, it is alright to position your card frames right into the top left corner as long as the non-printing margin remains free of text or graphics. This reduces the amount of cutting needed at the end and can help align the guillotine accurately. The Width and Height values entered are the dimensions of a standard credit card, the best size for business cards.



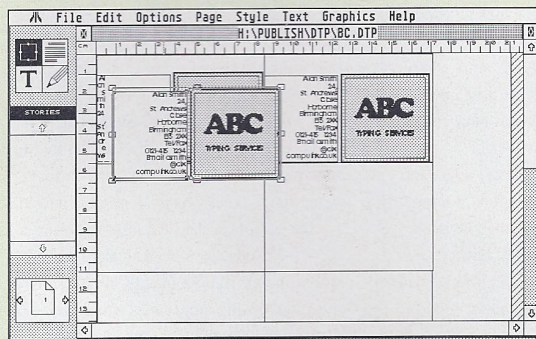
The complete invoice/compliment slip page, shown without text and graphics frames for clarity. The more complicated a document, the more advisable it is to switch off the display of frames and guides for an uncluttered vision of what you are doing.



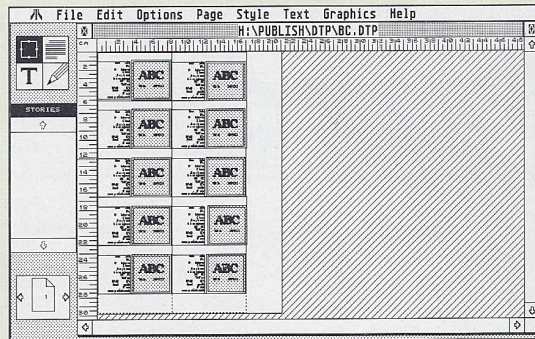
As Timeworks only has vertical (column) guides, I prefer to insert blank frames into the columns to give a visual indication of the outline of each business card. All the other elements are then positioned on top of these empty outline frames. If your text and graphics frames disappear behind the blank frame, just go into the Page menu to bring them back to the foreground.



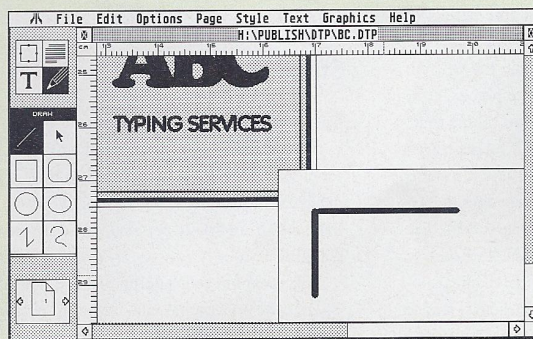
The logo and the business address are both imported from the letterhead by cutting and pasting via the clipboard. The text alignment for the "Address" style is changed to right aligned and the frame reshaped to fit snug against the logo, leaving the non-printing margins on the top and left clear.



The two frames - text and logo - are now grouped together by shift-clicking on both and copied to the clipboard. When pasted back into the page, the new copy appears slightly offset from the original and can now be moved to its appropriate empty frame, using "snap to" for precise positioning.



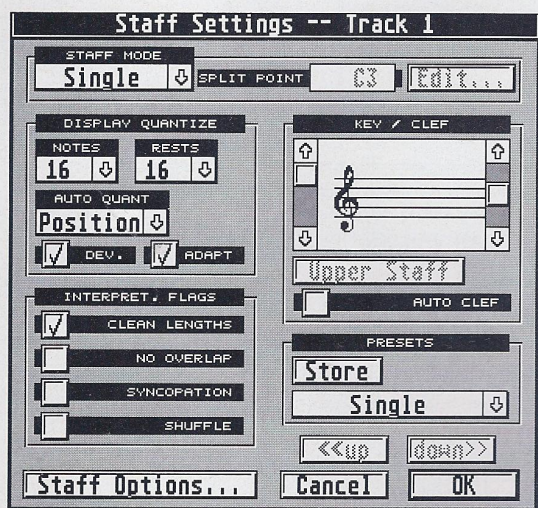
Ten business cards from each sheet of paper or cardboard, or one hundred from ten which should keep a small company going for quite a while! As these can be reprinted whenever required you do not need to commit yourself to a specific quantity as would be the case with commercial suppliers, and the savings can be very significant.



Simple cropmarks to guide the guillotine for accurate cutting out of the business cards can be added in the "waste" margin by using Timework's drawing tools. If carefully positioned, these will not show up on the final product. Remember that you have to create a frame before you can draw anything!

Sequencing - *beyond the manual*

To quantise or not to quantise, that is the question. Ian Waugh chairs the debate.



Cubase's Staff Settings help you to see and print a note-perfect score from recorded MIDI input.

Quantisation is the process of pushing and pulling notes onto certain divisions of the beat. It's used to correct poor timing in music lines which have been recorded in real time and it's an extremely useful function.

Even a good player might play a note or two a little earlier or later than they should be played and quantisation can pull them back into line. This results in a note-perfect performance. But is it really perfect?

The problem is, although the written notes in a musical score are precisely defined, it's the variations in timing in a performance which make it interesting. A note-perfect recording can sound robotic and mechanical. In the early days of sequencing much music was, indeed, like that and this gave rise to the idea that computer-based music is mechanical.

That's complete rot nowadays. Modern sequencers can record music with such a

high resolution that it's impossible to tell if a piece has been recorded with the aid of a computer or live onto tape.

Partially correct

So where does that leave quantisation? Well, most modern sequencers have a partial quantise function which moves notes only part of the way towards the target beat division. This is a lot more useful as you can correct the music with nudges rather than a sledgehammer. You can see how it works in the accompanying panel.

If a part needs quantising, start with a small percentage quantise setting and gradually increase it until you have removed the timing problem. Use your ears.

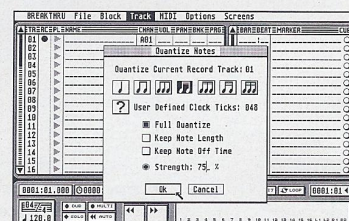
Sequencers such as Cubase, Logic and Notator have quantise as a track parameter. This means it is applied during playback only so your experiments will not permanently change the data although you can make the changes permanent if you wish.

You will not always want to quantise all the notes in a track. Many sequencers let you select the notes or patterns you want to change. If yours doesn't, isolate the notes or copy them to an empty track, quantise them permanently and then put them back where they were.

Strict timing

There are, however, certain types of music which do sound better heavily quantised. A lot of modern dance music falls into this category and you can't beat a rock steady bass and drum line to get a hypnotic trance going!

Classical music is another case in point. There's the apocryphal tale of the symphony orchestra hired to record some Hooked on



BreakThru has several quantise settings including partial quantise.

Classics material. The arranger had notated the score in traditional fashion but wanted the orchestra to swing it - this is standard procedure in band and combo circles. But they couldn't! Classical musicians are trained to play in strict time and he had to re-write the arrangement in note-perfect swing time, exactly as he wanted it played.

But although classical music is often regarded as always played straight, there is still scope for human feeling - it is, after all, the small timing differences which make one performance better than another. So, again, use gradually increasing partial quantisation settings until it sits together well.

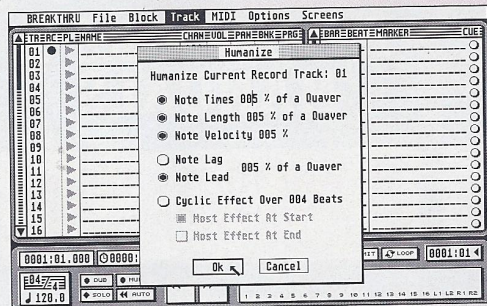
Human feeling

In an effort to create music with feeling, you may sometimes want to do the opposite - humanise music recorded in step-time. In the first place, if possible, record from a MIDI keyboard rather than clicking notes into an editor. That way they will have varying velocity values and such nuances in volume do have a positive effect on our perception of feeling. You can, of course, manually adjust the velocities while entering notes but it's a lot more work.

Many sequencers have a random or humanise function which adds small timing variations to notes in an attempt to imbue

them with human inaccuracies. It's a nice idea but the changes are applied, as it says, randomly. A good human musical performance may contain inaccuracies but they are not random - they're the result of subconscious musical sensitivity.

However, do experiment with the random function. A dash of it may just take the edge off a step-time recording. But don't overdo it or it will sound worse than a sloppy real-time recording.

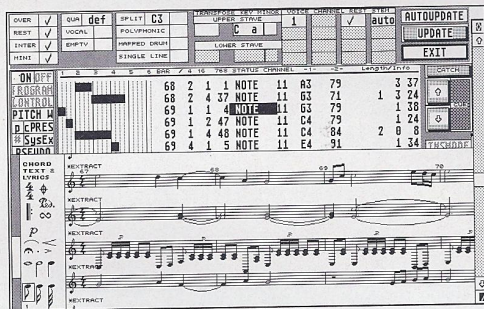


BreakThru has a humanise function which can apply random values to various note parameters.

Feeling groovy

Some sequencers go one step further with their quantisation functions and offer intelligent quantisation. Cubase's Analytic Quantise, for example, uses the quantise value to get an "impression" of the timing you require but tends to leave complex timing sections such as glissandos alone. Match Quantise lets you apply the feel and dynamics of one part to another part.

There's also Groove Quantise which isn't exactly a timing correction procedure but one to impose a certain rhythmic structure on a group of notes. Its most popular use is to create swing feels and it can convert a run of straight 1/8th or 1/16th notes into a swing pattern. Both Cubase and Logic have sophisticated groove functions. You can buy collections of grooves to load into the programs and design your own.



Notator's Parameter Mode window at the top of the screen controls the way the score is displayed.

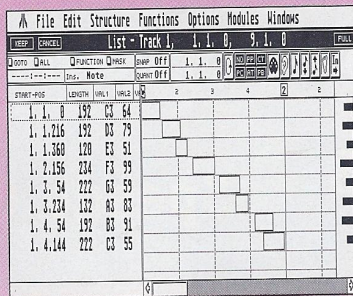
Perfect score

Finally, the other side of the coin is producing a note-perfect score from a real-time recording. If we were to notate music exactly as it was played it would be full of tiny rests, overlapping notes, spread chords and so on.

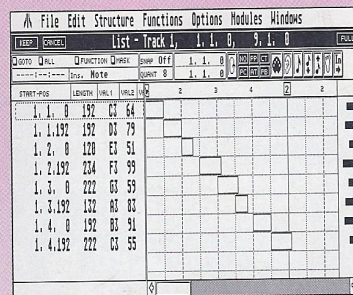
Fortunately, most score editors have a range of functions to help produce that perfect score. They essentially display quantise settings which change the appearance of the score but leave the actual note values alone.

They include settings to suppress tiny rests which occur if you don't hold notes for their full value and to remove overlapping notes if you hold down a note too long. Other options can display notes which are tied across beats as whole notes (a quarter note instead of two tied 1/8th notes, for example) which is how syncopated music is

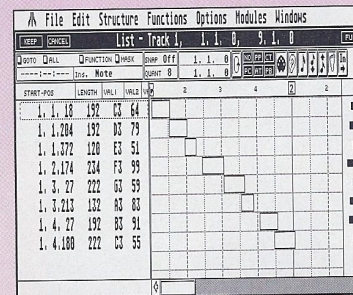
How quantisation works



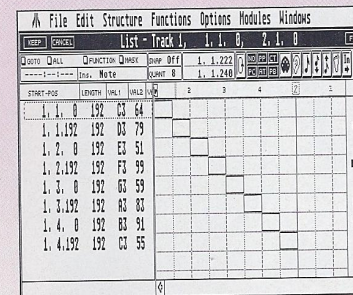
In a real-time recording the notes are likely to be different lengths and they won't fall exactly on the beat.



Normal or Note On quantise puts the start of each note exactly on specific divisions of the beat.



Instead of a full Note On quantisation, this has been partially quantised using a strength of 50 percent. The notes have been moved closer to the beat divisions - half-way, in fact - so the timing has been improved but some feeling has been retained.



Both the start times and the length of the notes have been fully quantised using a Legato function. Apart from the velocities the notes are now score-perfect.



This is how the original recording looked in a score editor with all the interpretation settings turned off.

often written.

If you are recording music primarily to print out, it makes sense to throw performance considerations out the window and record the parts as accurately as possible. But if you don't, it's reassuring to know that your sequencer can probably make them look perfect.



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Timeworks 2 manual

GST, the producers of Timeworks Publisher 2, were always renowned for the quality of their manuals. The Timeworks 2 manual is a model of clarity and will help any user get the best from this great program. We have the original manual available for just £14.99.

The full manual for just £14.99

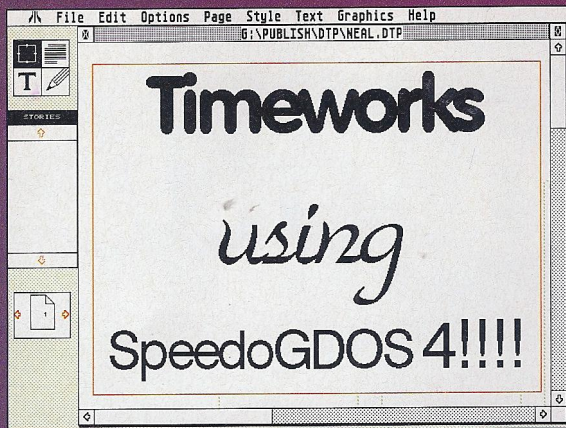
Get Speedo GDOS and Timeworks 2.04 for just £49.99. Save £50 when you also buy two font packs.

About fonts

The full version of Timeworks on the Atari World readers disks uses GDOS, the forerunner of Speedo GDOS. This means the fonts it uses are all bit map fonts, ie the font contains a collection of dots that go to make up each character. The fonts are therefore all fixed in size. For most DTP applications this is not very satisfactory. Whilst you can change the size of a bit map font using a font editor, the normal results mean a drop in

quality. Having created a new bit map font it can also be tricky to get Timeworks to recognise it. Speedo GDOS solves all this by using Speedo outline fonts. An outline font is a font that is stored as a collection of mathematical type expressions, ie lines, curves etc, not as a collection of dots. Speedo GDOS takes an outline font and generates a bit map font at any size you specify - subject of course to you having enough memory in your computer. Some outline fonts have hint information in them. Hint information is used to improve the quality of

fonts at smaller point sizes. This means that when you use a good quality original font you will get better quality at small point sizes than you would using an un-hinted font. The Speedo outline font format supported by Speedo GDOS has hints. However other outline font formats common on the ST such as Calamus fonts and Calligrapher fonts do not have hints. If you are using either of these programs you will see an improvement in output quality by switching to Timeworks 2.04 and Speedo GDOS.



Publisher 2 using Speedo GDOS Timeworks Publisher 2.04 and Speedo GDOS 4 in action!

Extra Speedo Fonts

There are two versions of SPEEDO GDOS that work with Timeworks 2.04, SPEEDO 4.2 and 5. You can choose which to buy if you don't already have a copy. However, any serious DTP user will soon want more variety. That report, menu, invitation, newsletter or advert can be easily livened up by a change of font. COMPO have two font packs with more than enough fonts to suit all but the most demanding Atari owner. Font Pack Office is designed for the designer producing documents typical to the office environment. It contains fonts ideal for reports, thesis, direct mail etc. Font Pack Gold is more for the 'designer DTP' type applications such as adverts and greeting cards. Both packs contain around 100 fonts each. The Office pack gives you a wider range of variants on the same font whereas the Gold pack contains more variety of font styles.

The number in brackets () gives the number of different styles of each particular font.

The fonts in the Office pack...

Futura (17)
Humanist Slabs 712 (4)
Blackletter (1)
Americana (4)
Bernhard Modern (4)
Caslon 540 (2)
Blippo (1)
Bernhard Bold Condensed (1)
Bernhard Tango (1)
BALLOON (3)
Bruce Old Style (2)
COPPERPLATE GOTHIC (5)
Bookman (2)
Caslon Openface (1)
Caslon Bold (2)
Futura Black (1)
Compacta (1)
Humanist 970 (2)
Humanist 521 ((11)
Aldine 721 (7)
Humanist 531 (3)
Bernhard Fashion (1)
Humanist 777 (7)
Caslon Old Face (3)
Aldine 401 (4)
Bitstream Amerigo (5)

The fonts in the Gold pack...

Amazona (1)
Impuls (1)
Bitstream Cooper (10)
American Text (1)
Brush 445 (1)
Egyptian 505 (3)
Zapf Calligraphic 801 (4)
Egyptian 710 (1)
English 157 (1)
Impress (1)
Poster Bodoni (2)
Kaufman (2)
Commercial Script (1)
Zapf Elliptical 711 (4)
UMBRA (1)
Cloister Open Face (1)
Goudy Heavyface (2)
Exoric 350 (3)
Zapf Humanist 601 (8)
MAXIMUS (1)
Goudy Handtooled (1)
Goudy Catalogue (1)
Hobo (1)
Wedding Text (1)
Freeform 721 (4)
Freeform 710 (1)
STENCIL (1)
University Roman (2)
INFORMAL OT1 (2)
SHOTGUN (2)
Candida (3)
Cloister Black (1)
BANK (2)
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TOTAL

The *Language*

Atari World presents the last set of exclusive excerpts from Mark Baines' definitive A to Z guide to the Atari.

This month we present the last of six edited excerpts from Mark Baines' Atari A to Z, the essential guide to everything to do with Atari. Note the words edited excerpts – the full text runs to 128,000 words and it is aimed as much at the beginner as it is the experienced Atari user. It really is a case of everything you wanted to know about your Atari but were afraid to ask!

If you want the complete guide, you can order Mark's book direct from Linnhe Computing, Shore Street, Inver by Tain, Ross-shire IV20 1SF or telephone (01862) 871624. You can also email Mark at msbaines@cix.compulink.co.uk. Remember, if it isn't in the Atari A to Z, it probably doesn't exist!

The cost is a very reasonable £13.50 in the UK, £15.20 for the EC, £18.20 for North America and £19.30 for Australia. These prices include post and packing. Payment is by cash, cheque (UK banks or Eurocheque only) or postal order payable to Mark Baines.

Title bar

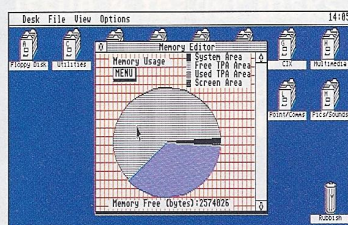
The shaded box across the top of a GEM window containing the window title which can be grabbed to move a window on the screen.

*.TOS

The file name extender for TOS programs that don't use any GEM features and use simple text displays.

TOS

The Operating System and definitely not 'Tramiel Operating System'. The operating system of the Atari ST to Falcon range, consisting of hardware dependent and hardware independent parts. The BIOS and XBIOS are hardware dependent and therefore specifically written for the type of computer. GEMDOS and GDOS are hardware independent and capable of running on any machine.



TPA. This graph clearly shows the amount of memory available for programs and how much of that is already used.

Transient program area - TPA

That area of memory reserved for user programs loaded from disk.

Trash can

The icon representing a delete function for files.

TSR

Terminate and Stay Resident. A program which, once loaded, remains dormant until called upon by the user or continues to run in the background. Many Auto folder programs and accessories are TSRs.

II

TT = Thirty Two. A development of the ST using a 32 MHz 32-bit MC68030 processor, hence the name. Features include a maths coprocessor, Fast RAM, SCSI, LAN and high-speed serial ports and a VME bus. There are extended colour resolutions including a VGA mode of sixteen colours at 640 by 480 pixels, and 320 by 480 in 256 colours, as well as the ST modes. A TT high resolution monochrome mode of 1,280 by 960 was years ahead of its time. The sound subsystem is the same as that on the STe. There is a separate keyboard and a hard disk within the main casing.

TTM194

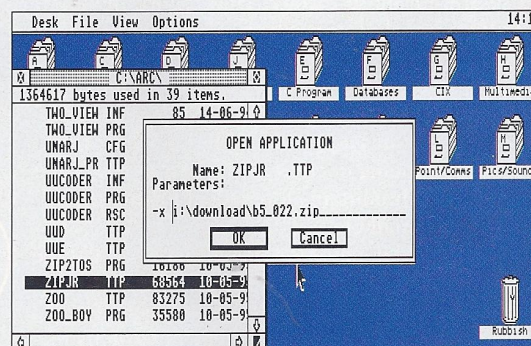
An Atari 19 inch monochrome monitor for the TT.

TTM195

An Atari 19 inch monochrome monitor for the TT.

TTMMU

TT Memory Management Unit. The chip that manages the TT Fast RAM memory on its expansion board.



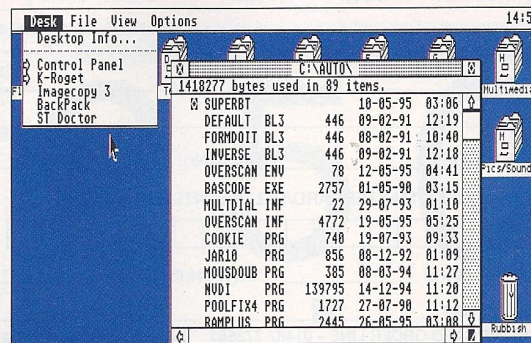
A typical parameter line for a TTP program showing a command and a file path.

TTP

Tos Takes Parameters. The Atari program file name extender indicating that the TOS program can take parameters from a command line.

User mode

The mode of the processor in which it is executing instructions of a user program.



TSR, VBL. TSR programs and those that use VBLs are nearly always installed from the AUTO folder or as an accessory.

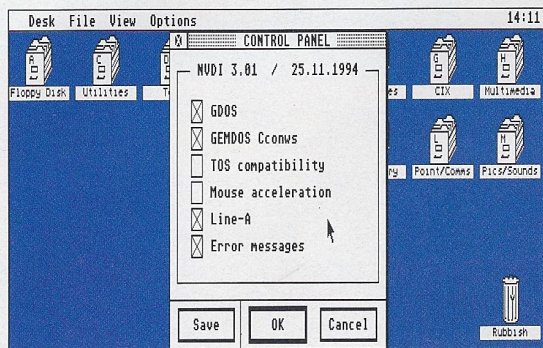
VBL

VBL = Vertical BLank interrupt. A condition which is triggered as the screen raster beam (which draws the display) returns to the top left-hand corner from the bottom right-hand of the screen, which may be 50, 60 or 70 times a second depending on the resolution.

Barrier

monitor and country. In the time it takes the beam to move to the top of the screen, some programs such as TSRs can do some processing. TOS also uses it to erase and display the mouse cursor as it moves across the screen.

The VDI can be speeded up tremendously by installing NVDI.



VDI

Virtual Device Interface. The part of GEM that provides the graphical routines for point plotting, line drawing, area filling and text drawing with output to any printer, plotter or screen.

WIMP, Window. All the attributes of a WIMP environment are found in GEM, including the Trash Can icon.

VectorPad

A pressure sensitive pad found on the ST Book used in place of a mouse.

VIDEL

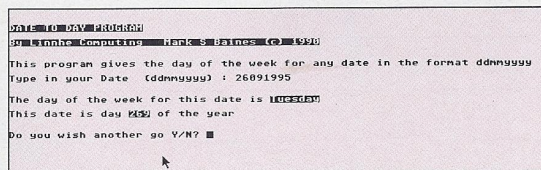
The Atari custom chip video controller in the Falcon which controls most video functions including overscan, overlay mode and true-colour graphics.

VME bus

Versa Module Europe. An industry standard interface for add-on circuit board cards called Eurocards, supporting a fast data transfer rate and found on the TT.

Volume/tone control chip

A National LMC1992 Computer Controlled Volume/Tone Control chip in the STE, TT



TOS, VT52. TOS programs draw directly to the screen and can use the VT52 control codes, such as the common inverse video mode seen here.

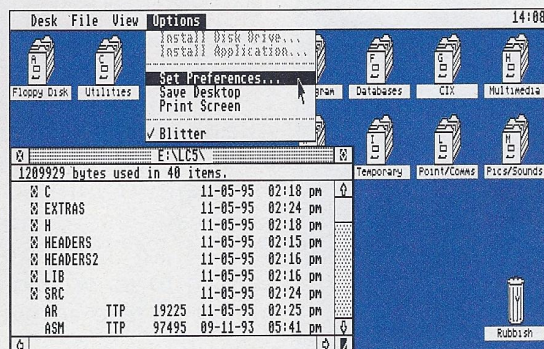
and Falcon used to provide volume and tone control of the stereo DMA sound production.

VT52

A standard terminal emulation mode, built into TOS and used to control the cursor on the screen and various other miscellaneous screen functions, such as erase, insert, and colour control in *.TOS and *.TTP programs.

WD1772

The floppy disk controller chip.



WIMP

Windows, Icons, Mouse, Pull-down menus. (or Windows, Icons, Menus and Pointers). A graphical user interface with windows and menus, predominately mouse controlled and characterised by the use of file dragging techniques and a "Trash can" for file deletion. GEM is a full WIMP environment.

Window

In a WIMP system an area within a frame in which the output of a program is written and the user input takes place - a virtual screen for a program.

XBIOS

eXtended BIOS. The machine-specific extension to the BIOS that supports the special hardware features of the computer interfacing to the serial port, the disk drive, sound, video SHIFTER and BLITTER chips, keyboard etc.

XCONTROL panel

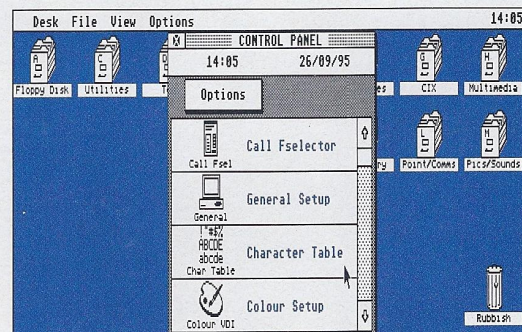
eXtensible CONTROL panel. The Control Panel accessory that takes up one accessory slot but can load up many separate CPX modules each performing a specific task, such as setting another program's parameters or a calculator.

YM-2149

The Yamaha-made programmable sound generator chip that also controls the parallel printer port.

Zoom

In computer graphics, to change the size of all or part of the elements of a display, usually to magnify or enlarge.



XCONTROL panel. One of the most useful accessories you can load with lots of CPX modules to choose from which take up little memory.



FALCON OWNERS GROUP

"THE FALCON OWNERS GROUP has been around for as long as the Falcon030 and is responsible for producing the electronic publication 'FALCON UPDATE', as well as stocking a healthy public domain library and offering help and support where possible, both on-line and off.

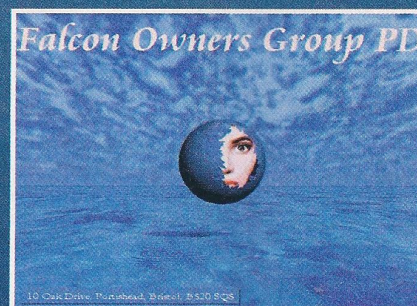
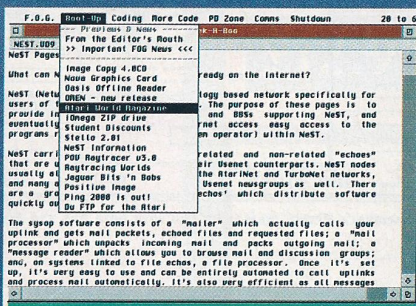
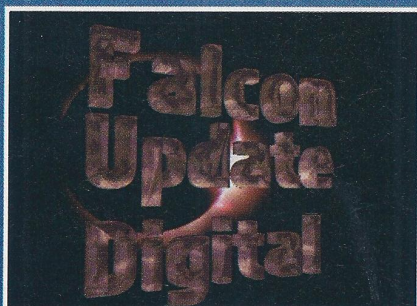
For the last two years FOG has been somewhat in-active while the rest of the Atari community has left ahead. This is about to change with the brand new re-launch of the Falcon Owners Group. We have made some large changes inside the club and are now geared back towards serving any Falcon owner, anywhere."



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"We are still publishing our electronic magazine FALCON UPDATE and issue 9 out this month. Readers contributions are most welcome and we will print almost anything we get sent. We are also offering a well stocked PD LIBRARY, packed with 100% Falcon applications from the latest demos to games and utilities. Our prices are lower than you might expect. We also have our own section on 42BBS where you can download plenty of software while catching up with the latest news and messages. Call now on 01256 895106. Or if that proves too busy you can always check out Chameleon BBS on 01454 881095. So why not cut out the coupon below and send it to us with a blank disk for more information and plenty of free software. You'll be surprised at the change."



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Colour theory

We all take colour for granted these days. Colour TVs, colour film, colour magazines and even newspapers. But unless we need to, we don't give it a second thought, it just seems so natural. Indeed, the human eye can absorb an incredible amount of colour information, being able to distinguish between millions of colours.

Colour systems



Ofir Gal takes you through the basics of colour printing.

The systems we use to reproduce colour, be it on print or screen, are far from perfect. They are only able to reproduce part of the visible spectrum. The system first developed in film and later used in television and computer displays is known as RGB. It is based on the fact that adding the three primary colours, red, green and blue produces white light. All these devices work by shining light through or by exposing three layers of film, each sensitive to one of the primary colours. By mixing these colours one can achieve almost any visible colour. Shining green and red lights for example produces yellow, and shining red and blue produces a pinkish magenta - exactly the same as the way you mixed paint when you were at school. The RGB system cannot produce pure yellow or true cyan but it can get pretty close.

The printing process cannot use the additive RGB method because it is based on adding coloured lights, not mixing colour dyes. The three opposite colours to red, green and blue are used instead. Cyan, magenta and yellow, or CMY as they

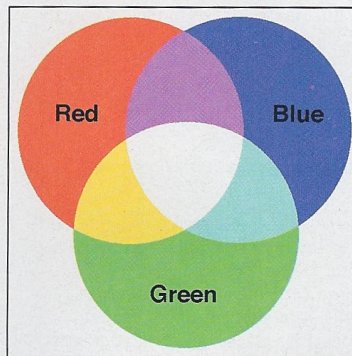
are better known, are the basis for the printing process.

Black is produced by mixing all three, white is produced by not using any ink and almost any other colour is achieved by mixing varying proportions of the three colours.

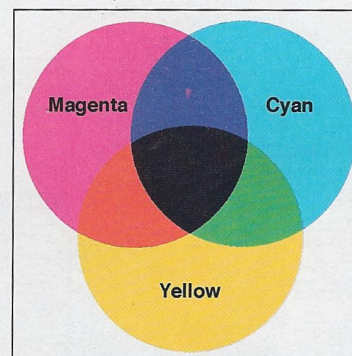
There are several problems that occur using the CMY model. Since colour dyes are expensive, producing black by using all three is a waste, it also causes the printing paper to become wet causing it curl. Slight misalignment can cause black text to become blurred, otherwise known as registration problems. Finally, due to imperfection of the dyes, the black the three dyes produced is not quite black, it tends to be more like dark muddy brown. The solution was simple, a fourth dye was added and CMYK was born. The K stands for the black dye - a B wasn't used to avoid confusion with Blue.

The CMYK system means that some colours can be produced in more than one way. Instead of increasing the amount of two dyes to make an image darker, black can be used to achieve a similar, but not identical effect. While some colours can be produced in several ways, the CMY model and therefore also the CMYK system cannot produce the full visible colour range. It is much worse than the RGB model in this respect and fails most noticeably when reproducing pure blue and red. When a colour is out of the range of the colour system in use it is said to be "out of gamut".

At this stage I would have shown you two images, one using the RGB system and



The RGB colour system is based on adding three coloured sources of light in varying intensities to achieve the full spectrum.



The CMY model is based on cyan, magenta and yellow, three dyes that absorb the three primary colours - red, green and blue.

the other using CMYK so you can see the difference, but I can't. This magazine, like any other, is reproduced using the CMYK system, the same one that cannot reproduce pure red, blue and green properly!

New systems are starting to arrive that offer six or even seven colour printing. This allows a faithful reproduction of a greater number of colours, but it is also more expensive.

Colour printing

Colour printing support for the ST has been minimal due to the fact that the vast majority of users were using a monochrome monitor. Even colour on the ST is limited to 16 colours in low resolution. Although graphics cards were always available for the TT, it took the

arrival of the Falcon to prompt developers to add colour support. Several programs now support colour output, including DA's Layout, Calamus SL, Imagecopy and GEM-View. The long-awaited Papyrus 4 is rumoured to offer colour printing

support too. Although you cannot view true-colour images on a basic ST, there's nothing to stop you from printing them.

Most computer images, such as the ones generated in a paint program or loaded from a PhotoCD, are RGB based. They contain three bytes per pixel. Each byte, as you may know, comprises of eight bits. Three times eight gives you the 24-bit or true-colour image. When printed they are converted into CMYK if you have a

colour printer, or simply to greyscale before they are printed. The conversion stage is crucial to how the final print will look. A good conversion algorithm will take the constraints of the CMYK model into account and compensate for them.

Another crucial point is that a printer does not have any density control, it can either place a tot of ink or leave the area clear. There is no control over ink brightness or darkness. To create the illusion of a continuous tonal range, the printing process places dots of varying sizes. Clusters of larger dots give the impression of dark colours and smaller dots give lighter colours. This method is known as halftone screening. If you examine any picture in this magazine with a magnifying glass you will see how this works.

In order to produce dots of varying sizes, resolution has to be sacrificed. On a 300 to 600 dpi printer one has to compromise colour fidelity with resolution. The screen halftone resolution, or frequency is measured in lpi (lines per inch). A 300 dpi colour printer can

reproduce 16 million colours at 75 lpi but only 3 million colours at 100 lpi. A 600 dpi printer can reproduce 16 million colours at 150 lpi. The majority of magazines and other publications are printed using 133 to 175 lpi.

Image Resolution

Due to the way each image pixel corresponds to a printing screen dot, it's best that the image resolution is 1.5 to 2 times the lpi. If you have a 300 dpi colour printer and you are printing using a screen frequency of 75 lpi, your colour image need not be more than 150 dpi. This means that if you want to print an image which is 4 inches square, it should contain $600 \times 600 = 360,000$ pixels. Multiply that by 3 to get the required image file size - approximately 1Mb in size. If memory and disk space are short you may well want to opt for an image resolution of 120 dpi. This will reduce the image size to $480 \times 480 \times 3 = 691,200$ - a little under 700K and the difference in quality will be negligible.

Jargon buster

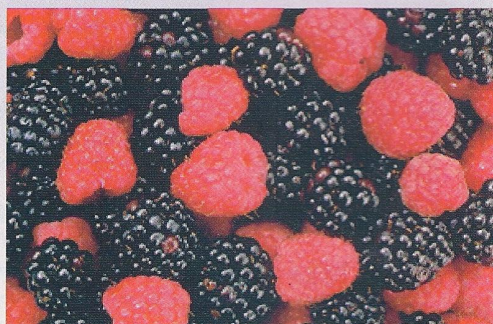
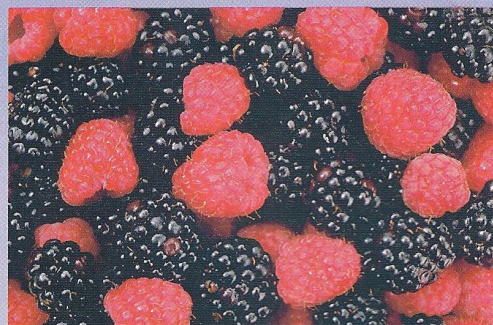
dpi: Dots per inch, also known as ppi (pixels per inch). A unit used to measure the output resolution of a monitor or printer. In the case of a printer this signifies the size of the smallest dot it can produce (typically 1/300 of an inch).

Lpi: Lines per inch. The measure of the number of dots in a halftone screen. **Colour saturation:** The colourfulness of an image. A totally un-saturated image appears as greyscale. The CMYK process is not ideal for producing saturated primary colours.

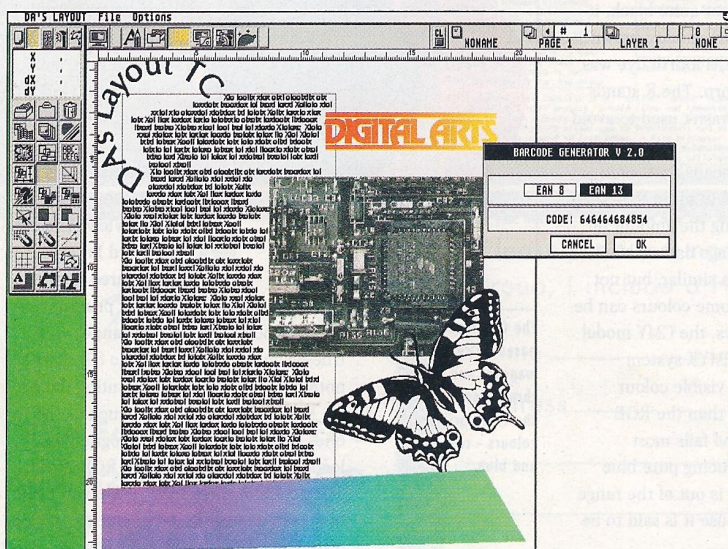
Greyscale: An image containing no colour information, used for black and white printing. Greyscale images use one byte per pixel, giving a range of 256 shades of grey.

True-colour: Generally means a 24-bit image or display where each pixel can display a range of 16,777,216 colours by mixing red, green and blue in varied intensities.

Colour separation: The process of separating a colour image into its CMYK components.



These three images were printed at the same screen frequency of 150 lpi. The recommended image resolution for this frequency is between 225 to 300 dpi. The resolution of the images is (from top to bottom) 300, 200 and 100. You can see that while 100 dpi is obviously pixelated, the difference between 200 and 300 dpi is less obvious. The file sizes of the images were 1,607K, 715K and 178K respectively.



DA's Layout is one of several programs that support colour separation.

Printer type...

Printer	HP Deskjet
Colour	☒ Monochrome ☐ CMY colour ☐ CMYK colour ☐ CMY separation ☐ CMYK separation ☐ CMY+K separation
Resolution	
Quality	
Output	BIOS
Feed	Automatic
Save OK Cancel	

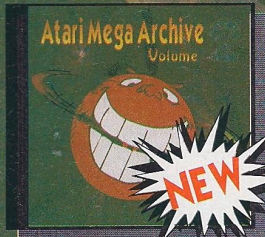
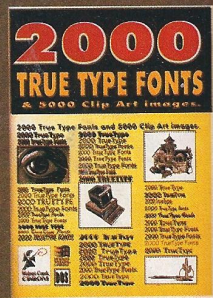
Imagecopy.tiff: Imagecopy is capable of stunning colour prints with most printers.

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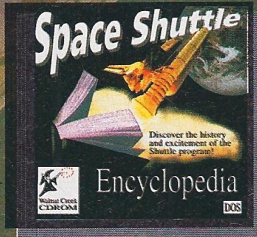
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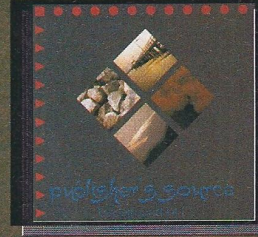
Atari Mega Archive Volume 1
Latest PD/Shareware
Compiled in the UK



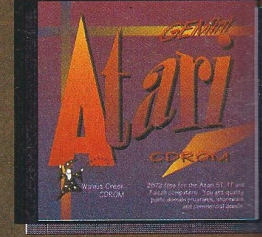
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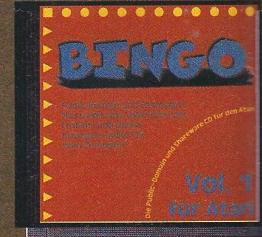
500 TrueType
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PD/Shareware Menu
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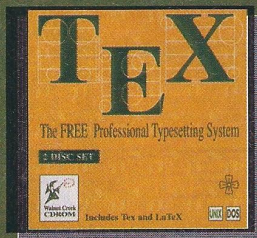
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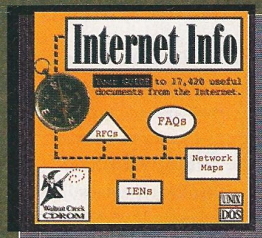
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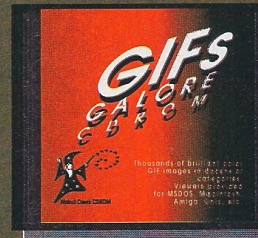
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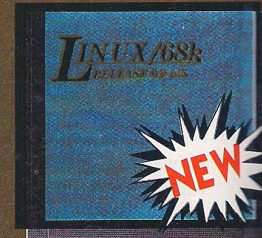
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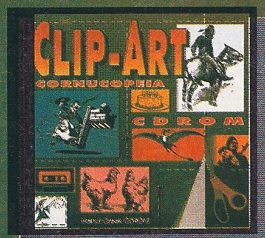
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Most useful internet info



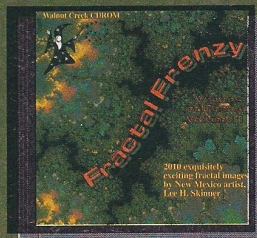
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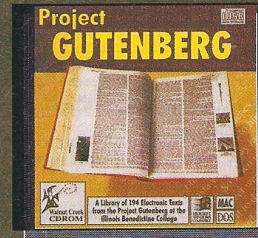
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Pixel magic

Even the most modest Atari computer setup can be turned into a digital darkroom, as Günter Minnerup shows in his new series on image editing.

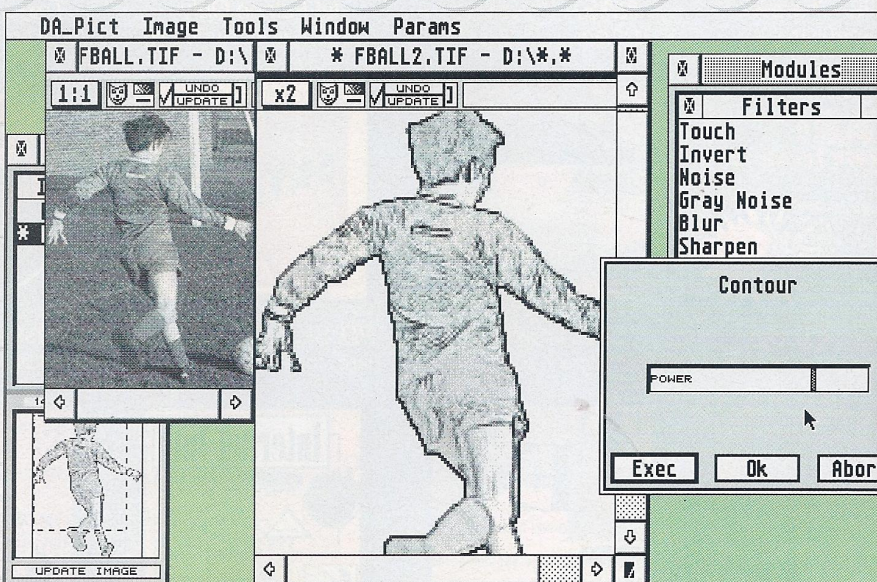
There are few applications better suited to showing off the power of computer graphics than image editing programs. If you ever believed in the veracity of photographic evidence, you will quickly change your mind when you see an experienced operator let loose with a scanner and image processing software: people can be made to disappear from groups and others who were not present in front of the camera added. Even the holiday snaps of your rain-sodden fortnight in North Wales can be changed to brilliant sunshine and a cloudless blue sky.

Touching up photographs in this way used to take hours of painstaking manual labour by highly-trained specialists, and was rarely very convincing - now the fakes require only a few minutes, and anybody can learn the tricks of the trade in a relatively short time. As the name of one of the pioneering Apple Macintosh packages of a few years ago suggested, image editing programs are really "digital darkrooms", capable of transforming the appearance of photographic material in countless ways.

Trickery

The main beneficiaries of this digital trickery, of course, are desktop publishers and illustrators. Photos can be tweaked to squeeze the last ounce of quality from often indifferent material, scratches and blemishes in the original artwork can be made to disappear, and elements cut out from photographs can be combined with text, drawing or other photographic material in montages without the crude and messy use of scissors and paste. Adobe PhotoShop, the industry-leading software package for Macs and PCs, can now be found in virtually every design studio and publishing house.

There is no shortage of similar, although somewhat less powerful, programs for Atari computers: Retouche, Retouche Professional, DA's Picture, Chagall and TrueImage are just some of



the commercially available image editors. The trouble is that this kind of software is really miles ahead of the standard Atari hardware: the editing of photographic images, especially in colour, requires a lot more oomph than the average home computing setup can offer. This applies equally to memory and storage space, processor speed and graphics displays, as the following example will show.

A monochrome image of a quarter page size scanned at 300dpi resolution for reproduction on a laser printer will take up approximately 250K. But monochrome scans are no use for true image editing, as the pixel dots it is made up of are either black or white and there is little you can do to alter them. The same image, scanned at 256 grey levels, will be eight times larger at something like 2 megabytes, and three times that for colour! Though some trade-off between grey levels (or colour depth) and resolution applies, helping to reduce the data volume by as much as half or sometimes even more, the RAM and storage capacities needed are clearly considerable. Performing sophisticated

DA's Picture from Digital Arts, who also gave us DA's Repro, DA's Layout and DA's Vector, is one of the leading Atari image editing programs.

editing operations on such enormous files also imposes a huge strain on the processing power, too much of a strain really for an unaccelerated, 8MHz CPU as found in standard Atari STs.

Display

Add to that the display quality needed to be able to see on the monitor what you are doing to a photographic image, and you will appreciate that competing with the professionals in this department is something that should be strictly reserved for those few lucky Atari owners with a TT or Falcon, large amounts of RAM, a fast colour graphics card and a nice, big colour or greyscale monitor. But this does not mean that ordinary ST users cannot employ image processing software to great advantage in more modest projects, far from it, and this new series of articles will show you how.

You have to be realistic, though: it is simply impossible to prepare high-quality photographs for printing in a glossy

magazine using a standard Atari monitor. The reason for this is that the colours, or shades of grey, visible on the screen are the result of a process known as dithering: the limited colours available (usually 16 or even just two with monochrome monitors) are arranged in dot patterns to create the illusions of more colours or shades than are actually present, at the expense of resolution and therefore the finer points of the picture. The secret of success is therefore not to be overambitious and only to tackle editing operations that can still be monitored on such displays. As this

series will show, there is still plenty that can be done even with modest hardware setups.

To return to our starting point: convincing photographic forgery would be impossible to accomplish as the fine control over graduations of grey needed to seamlessly eliminate someone from a group photo cannot be monitored on a typical Atari screen. But provided the original photo has nice strong contrasts and contains objects with well-defined contours, cutting out one such objects and combining them with text and drawings

into an attractive photomontage for the cover of a newsletter or manual is well within the realm of possibility. As is the general optimisation of scanned material for best possible reproduction on relatively low resolution printers such as lasers and Deskjets and the application of a variety of sophisticated editing tools to both colour and greyscale images for special effects.

The full range of tools and effects made available by image processing software to even the most humble Atari computer will be surveyed next month.

Basic concepts explained

Digitise

For a computer to be able to edit an image, it has to be present in machine-readable form and therefore in numbers (digits). The most commonly used device for digitising photographs is a scanner, which will run a beam of light over the surface of the image and convert the reflections into numerical values that are saved to a file. Single video frames obtained with video digitiser hardware can also be used, however, as can pictures created "manually" with ordinary painting and drawing software.

Pixel depth

Simple monochrome dots can be described using one binary digit - 0 or 1 - as they are either black or white. For greyscale and colour images, more than one bit is needed to describe each pixel: 8 bits for up to 256 greys or colours, 24 bits for 16 million colours.

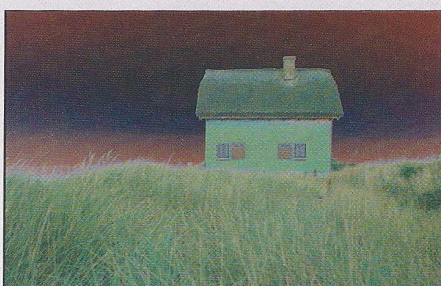
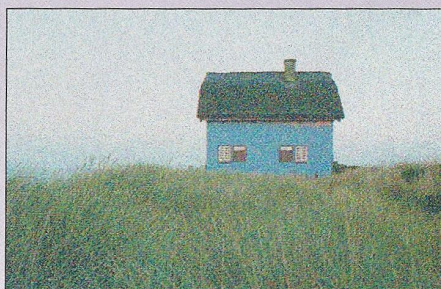
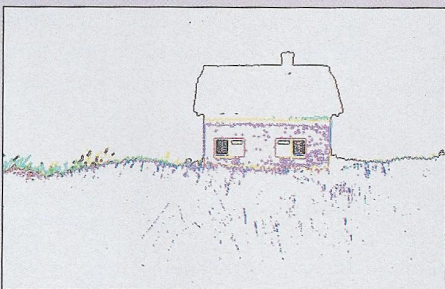
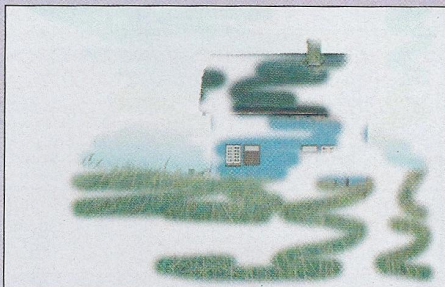
Resolution

Whatever the colour depth of each pixel, the resolution is expressed in the number of pixels or dots per inch (dpi). The higher the dpi value, the more detail a picture can contain, and the larger it will be.

Dither

The combination of adjacent pixels into "dither patterns" to create the illusion of additional "mixed" colours or grey shades in between black and white. As this reduces the number of picture dots that can be displayed, dithering effectively reduces the resolution and blurs fine details.

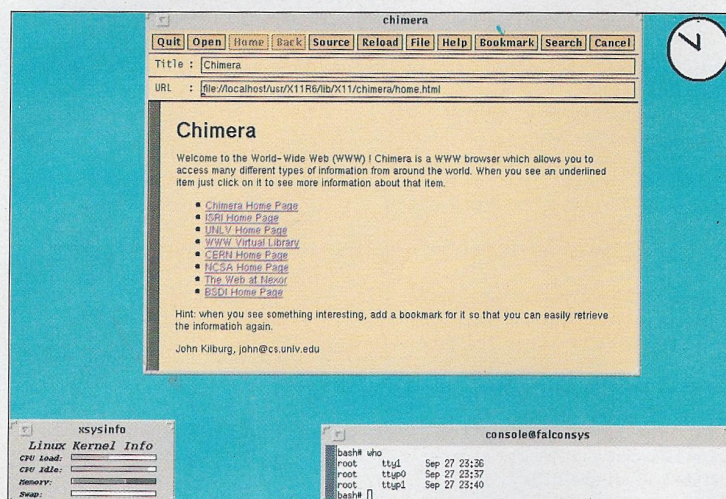
Some of the effects that can be achieved with a competent image processing package at a few clicks of the mousebutton, without any detailed knowledge of the technicalities.



<http://exxos.www.idnet.com/IMPULSE/atari/last/>

Linux lineup

Jonathan Waite looks at Atari Linux, a complete new operating system on CD ROM.



Chimera (a WWW browser) and xsysinfo (system utilisation monitor) under X.

The Atari Linux Distribution is a full multitasking, multiuser Unix implementation based on Linux/68k. It includes full TCP/IP connectivity to allow direct connection to the Internet as well as the de facto standard Unix graphical user interface known as Xwindows. Pretty powerful stuff but the software included on the CD - including Linux itself - is public domain, so why pay for the CD?

Delta Labs have tried to produce a Linux-in-a-box system for the Atari, allowing you to install and get Linux up and running with an absolute minimum of background knowledge. PC distributions of this type have been around for several years, but this is, to my knowledge, the first attempt at a similar Atari product. Obtaining all the required files on one CD will also save you countless hours of download time via a modem and make the installation process much easier.

The distribution comes on a single gold disk multisession CD ROM containing just over 60Mb of compressed files. The benefit of using a (rewritable) gold disk is that updates can be added to the CD at a later stage by returning the disk. The original CD was constructed when v0.9.8 was the current Linux version and already one

clear, particularly since Linux/68k is effectively still beta software. Although the base system works reliably, the necessary drivers for many types of hardware are still being developed. For example, the SCC driver for the Falcon serial port only currently supports speeds up to 19,200 bps.

GEM install

The installation process runs from a GEM front end and is relatively straightforward. New users should, however, be extremely careful with the disk partitioning options as Linux requires dedicated hard disk partitions which the install program creates for you. It is easy to specify the wrong partition and wipe out a valuable TOS partition together with all the data it contains.

The installation program on the CD has German dialogues though an update disk from System Solutions containing an English translation is also supplied. Unfortunately some of the object indices appear to have changed so I found it impossible to actually install using the English version. I eventually managed to install by writing down the settings while using the English resource file and then selecting the appropriate options in the

update session to v0.9.10 has been added together with several programs not included in the original release, not to mention updated versions of others.

Linux/68k in the meantime has moved on and v0.9.12 is the current release. With this pace of change, the advantage of having a CD that can be updated becomes

German version. Hardly satisfactory and something which I hope will be fixed shortly.

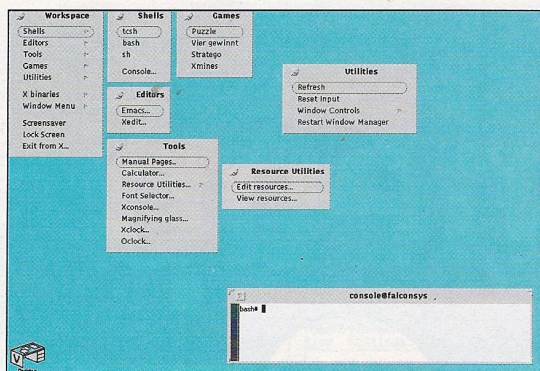
The program expands the compressed packages on the CD to the newly created Linux partitions on your hard drive. You can selectively install different packages if you are short of disk space, and the install makes it difficult to leave anything essential out. The total hard disk space required to install the entire CD is just over 150Mb, though you'll need additional space for compiling kernels (the core operating system) and your own program.

The minimum hardware requirements for Linux/68k are a 68030 processor with memory management unit (MMU) and floating point maths coprocessor. This limits the machines on which it will run to the TT and Falcon (with additional FPU). Also the Medusa and Eagle have a suitable architecture, but only the Medusa is directly supported at the present time. A suitably upgraded ST (for example the PAK68/3 upgrade with FPU) could also run Linux.

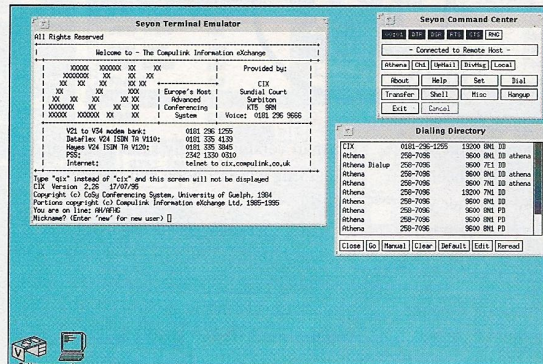
RAM hungry

Linux is also hungry on RAM; a realistic minimum of 4Mb - more is recommended, though some of this can be offset as Linux can use part of the hard disk as virtual memory. The price you pay for this is a reduction in speed. The speed overall is quite impressive on a 32MHz Falcon, although screen updates under Xwindows can be slow when the system is under load.

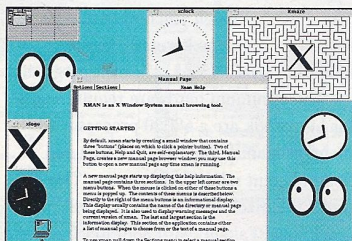
Although the origins of this CD are German, almost all the supplied programs and their documentation are in English. This does however mean that when you first boot into Linux your keyboard is mapped to the German Atari layout (for example, the Y and Z keys are swapped over). To prevent the German keyboard map being loaded, you need to edit some lines from the configuration file (see the accompanying panel).



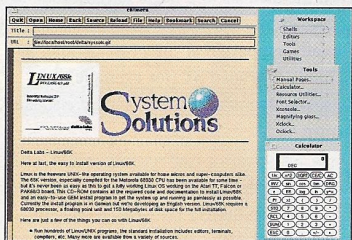
The Openlook window manager menus under X.



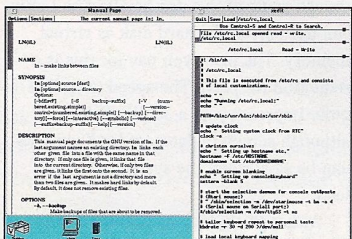
Seyon (communications package) connecting to CIX under X.



Various clocks and toys together with Xman under X.



Chimera displaying the System Solutions/Delta Labs WWW page under X.



Xman (online documentation) and Xedit (text editor) under X.

Once installed, to boot into Linux you can either use the supplied ALILO program from your hard disk's AUTO folder or run a *.TTP program from the GEM desktop. In future ALILO will become a boot sector program allowing you to choose between TOS and Linux boots before either is loaded.

There is an enormous amount of free software on the CD, all ready compiled for Linux/68k. Included is the complete GCC C compiler and libraries, a complete copy of GNU Emacs as well as all the regular Unix utilities and manual pages. If you've ever

Rob Perry presents a beginners' guide to installing Linux/68k.

Once you have completed the installation, using the GEM based installation program, you will need to follow these simple steps to get your Xwindows terminal up and running.

Boot Linux using the ALILO program that came with the CD.

Login using your chosen username (previously defined in your installation).

Type 'su' to enter Super User mode.

Type 'vi /etc/rc.local' this is allowing you to edit the file rc.local.

(Note that the Keyboard will be set up for German keyboards so to get a '/' you will need to type 'Shift 7')

Once you have the file rc.local on the screen, scroll down using the cursor keys until you reach the following line:

```
/sbin/selection -m /dev/atarimouse -t bm -a 4
```

Place the cursor at the beginning of the line and press the I key - this will enter you into editing mode.

Press the key next to backspace to insert a # symbol - this is to stop the kernel from using the mouse as a cut and paste tool from within the text environment.

Move down further to the line:

```
loadkeys /usr/lib/kbd/keytables/atari-german.map
```

Press the same key again to insert a # symbol - this stops the German keyboard map from loading as of the next boot.

Now you are ready to save the file again.

Press Control-C, then Return.

Press 'Shift Q' then type 'wq', press Return again.

Type 'exit' to exit from Super User mode.

Now you need to edit your Xwindows session file.

Type 'vi .xsession'

Scroll down to the beginning of the following lines and press the X key to delete the # symbols:

```
#xscreensaver >/dev/console 2>&1 &
#export OPENWINHOME=/usr/X11R6/openwin
#$OPENWINHOME/bin/olwmm >/dev/console 2>&1
```

To save the file again, press Control-C, then Return.

Press 'Shift-Q' then type 'wq', press Return again

Now you are ready to reboot to make the changes effective so press Control-Alternate-Delete.

Boot Linux once more, and login again.

At the \$ prompt type 'startx'

If all goes well you will be presented with your very own XWindow server. You can then browse around the programs installed already by using the left and right mouse buttons.

(Note that the current version of Linux does not like rapid movements from the mouse while Xwindows is busy. Try to move the mouse carefully to avoid miscellaneous characters appearing. The ideal solution is to buy a serial mouse to plug into your serial port as it does not suffer from this problem.

struggled to get GCC working well under MiNT you won't believe how well it runs under Linux.

The X installation is reasonably complete and well set up and it includes several megabytes of font files as well as an installed window manager (the Openlook olwmm manager). Also supplied are various utilities, programs and games for Xwindows including a very good screen saver. Two packages in particular worth a look are Chimera (a graphical WWW browser) and XV (a very good graphics

display and manipulation package). The online documentation utilities (man and xman under X) include hundreds of manual pages covering the majority of commands available making the whole system much more friendly for a new user.

If you have a desire to learn Unix, C programming or more about the Xwindows environment, or just want to connect directly to the Internet, Linux/68k is well worth a look. You'll need some pretty poky hardware but this CD makes it easier than ever to get up and running.

ATARI LINUX / 68K DISTRIBUTION

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With flying colours

Imagecopy is a well-known image capture utility. It has gradually grown to become much more and found a wide market as a result. Programmer Ofir Gal talks to Imagecopy author Jeremy Hughes about an issue dear to their hearts - GEM programming...

Imagecopy is currently at version 4. Throughout most of its life, Imagecopy was known as a reliable and highly compatible program. It is capable of displaying and printing images at the best possible quality. Designed with the typical ST setup in mind, it is able to produce high quality prints using standard desktop printers. I compared the output from Imagecopy with the king of all image manipulation programs - Photoshop, only to find that Imagecopy produced superior results, and faster!

Going by the looks of Imagecopy, it appears to be a plain GEM application with the addition of modern interface elements such as radio buttons and check boxes. But the truth is that in order to achieve its primary task, capturing the screen image, Jeremy had to hack his way around the operating system. This also applies to printing, somewhat which Imagecopy does particularly well - and very quickly. Bypassing old and slow TOS code, it can write directly to the printer port, achieving the fastest possible printing speeds.

Conversion of colour RGB based images (the ones you see on screen) to CMYK (as they appear on paper) is a demanding task and there is more than one way of going about it. Imagecopy is also capable of dithering colour images so that they can be displayed in 16 colours or even monochrome. Imagecopy can read and write images in a large number of formats and it even copes with rogue files, incorrectly written by other programs. It supports the Falcon DSP for JPEG viewing, runs in almost any resolution known to man (or at least, Atari-equipped man) and can run both as a desk accessory or a

standard program. It even runs successfully on any version of TOS, MultiTOS, MagiC and Geneva. The process priority of the program can be adjusted under co-operative multi-tasking systems or when running as a desk accessory. This allows for background processing to work on even the slowest systems.

To get Imagecopy to do the things he wanted, Jeremy had to battle with a variety of TOS bugs, several multi-tasking systems and screen accelerators. I asked him about these and other programming problems he had to work around, hoping that he would give out more useful tips in the process.

"NVDI has a bug in its circle-drawing routine"

Any questions...

Q There is a wide variety of Atari systems in current use. From a TOS 1.00 ST with a floppy drive, through Falcons and now MagiCMac, not to mention various patches like NVDI, WinX and other multi-tasking solutions. How do you cope with the compatibility issue? Do you find this a problem?

A It is a problem. I have to work around bugs in TOS, NVDI and the other multi-tasking operating systems. One irritating TOS bug is that scroll bars and arrows on desk accessory windows stopped working properly in TOS 2. They worked perfectly in TOS 1 but the bug still exists in TOS 4. Imagecopy 4 has an option to fix this bug, which it does by setting a timer event to check for scroll events in the `Evnt_multi()` call. NVDI is popular with users, but it has a bug in its circle-drawing routine that causes circles to appear as

ellipses in non-square screen resolutions such as ST medium resolution. This distorts the appearance of radio buttons in Imagecopy in these resolutions.

I try to write Imagecopy so that it works with basic Atari setups, but provides additional features or speed for people with more advanced systems.

Q What is your position regarding developments like NVDI 3? Is there any point in Imagecopy using GDOS printing and off-screen bitmaps now that they are finally available?

A I could make it an option in future versions. One problem is that only a minority of Atari users have NVDI 3. Another problem is that NVDI only appears to have limited support for colour image printing.

Q Imagecopy can grab screen shots almost under any situation, how did you manage that?

A TOS provides a hook that allows external programs to use their own routine for dealing with Alt-Help key presses when these are detected by the system. The major problem for Imagecopy is that it is not possible to use GEM calls from within this routine, so the dialogue boxes that Imagecopy uses for copying or printing screens are faked using Line-A calls. Imagecopy also uses Line-A information to detect the screen size and resolution, so it can work within programs that change the video mode to a different mode from the one that GEM is running in. Another problem is that Imagecopy has to try to avoid being called from a GEMDOS routine, since it needs to be able to use GEMDOS routines for its own file operations and GEMDOS is not re-entrant.

More bugs

Q Have you come across any significant TOS or NVDI bugs that you would like other programmers to know about?

A OS bugs are very irritating to programmers, because they force them to waste time tracking down problems that are someone else's responsibility. Ideally there should be a unified list of bugs and bug fixes for TOS and TOS replacements, so individual programmers spend less time tracking down problems which are already known.

"I tend to rewrite speed-critical routines in assembly-language"

Q With the variety of image file formats you must have found some pretty strange files - could you give some examples of files that were badly written?

A I think the TIM/THI/TIP/TIC files produced by Retouche and DA's Picture are a bad implementation of TIFF which most non-Atari programs would have difficulty in reading. They omit TIFF fields which are required fields according to the TIFF specification, LZW compression is incorrectly implemented, and true-colour images have their colour values inverted.

I have also come across incorrect versions of other formats such as Targa and PCX. GEM IMG files, which are supposed to be the standard Atari format have no proper defined standard for colour images - there are several extended formats and the most common of these (XIMG) exists in several incompatible versions. Sometimes the only way that Imagecopy can deal with strange image formats is to try to read the file according to the correct format and then try an incorrect version of the format if the correct version fails.

"Some Imagecopy dialogue boxes are faked using Line-A"

Speed issues

Q Imagecopy is very fast at printing, how did you manage that?

A Partly by providing a direct output routine that bypasses the TOS output routine, but also by optimising speed-critical routines.

Q What portions of Imagecopy are written in assembler and why? How much faster is it at any given task compared to C?

A I tend to rewrite speed-critical routines in assembly language. Sometimes a hand-optimised routine can be twice as fast as the original C routine. This is a limitation of the C compiler rather than the C language. My impression is that Lattice C produces good machine

code, but it is usually possible to improve on it by removing unnecessary memory accesses and by improving register allocations.

PhotoCD and JPEG

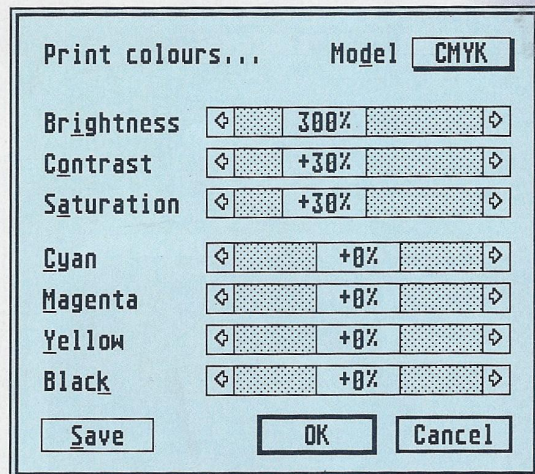
Q How did the idea for PhotoCD cropping come about? Is there anything about CD ROM access that programmers and users should know?

A Imagecopy uses an Atari version of Kodak's PhotoCD library code, which contains built-in support for reading blocks from complete images, so it seemed like a good idea to make use of this in Imagecopy. CD ROM access should be transparent to programmers and users with a good CD driver. In practice I have found that ExtenDOS works well, apart from an annoying problem that causes the system to freeze periodically when ExtenDOS is used with Screenblaster.

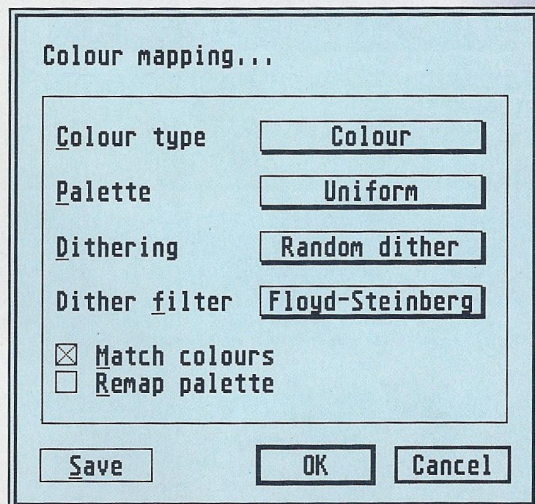
Q What do you think about JPEG? Which compression ratios would you use for publishing if at all?

A I think JPEG produces impressive compression ratios - true-colour JPEG images are typically 5% of their original size. The problem with JPEG is that it is a lossy compression system - compressed images are not identical with the original uncompressed images. Information is lost because the image data is 'sub-sampled' (colour information is averaged across groups of pixels) and then 'quantised' (values are truncated so that high-frequency components are stored with less precision than low-frequency components). The degree to which information is quantised can be controlled with a 'quality' setting, so that a 95% quality JPEG image has less quantisation than a 75% image, and a 100%-quality image is not quantised at all. The downside to this is that high quality images take up less space than lower quality images, and all images (including 100% images) lose information by sub-sampling.

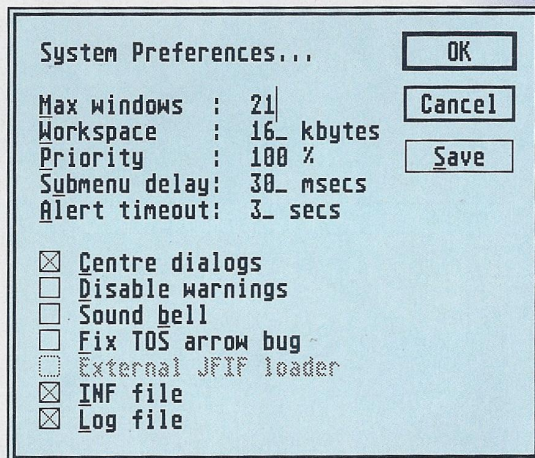
In practice, the losses caused by JPEG compression are difficult or impossible to detect if the image is printed at a reasonably high resolution, but are more noticeable when the image is viewed on screen. This makes JPEG a good final format for publishing, but a bad intermediate format for processing images, where successive distortions are introduced each time an image is saved and reloaded. 75% seems to be a good quality setting for most purposes. I don't think it is worth going below this or above 95%. Images degrade noticeably at lower settings, and I find it difficult to detect any difference between 95% and 100%-quality images, although the latter take up twice as much disk space.



Imagecopy is designed to get good quality prints from even the cheapest printers. This dialogue box enables adjustment of the colour components.

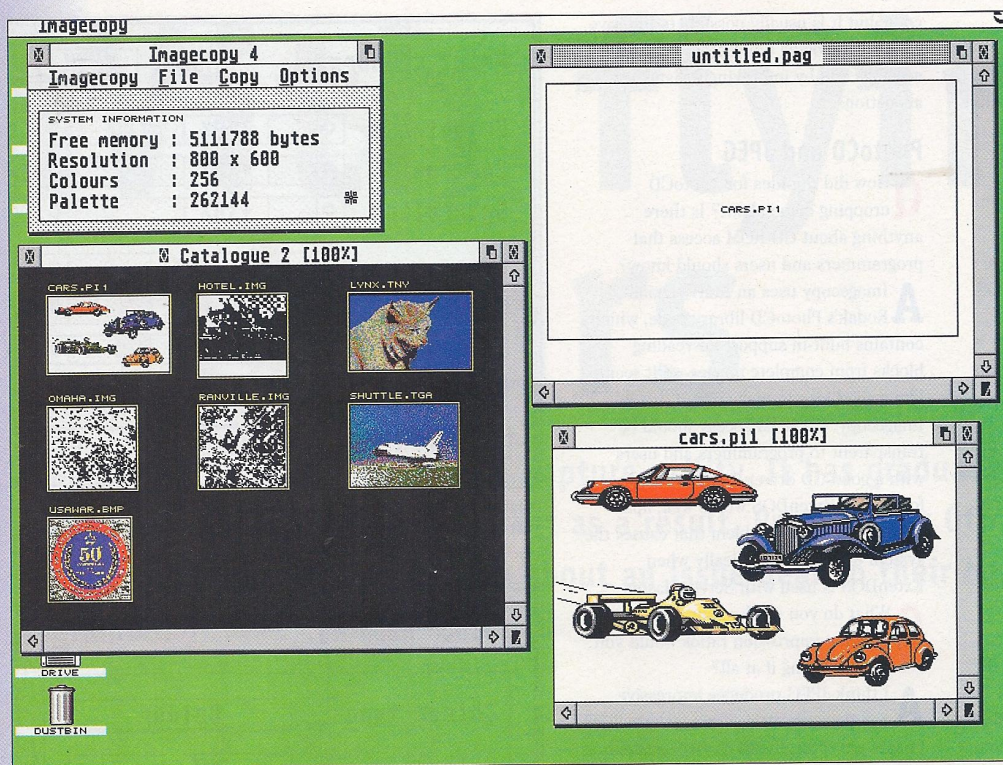


Several dithering algorithms are available in Imagecopy. Coupled with the adaptive palette, it is capable of a decent colour display even with only 16 colours.



Imagecopy has a number of options designed to combat some of the bugs and inadequacies of TOS.

"The losses caused by JPEG compression are difficult or impossible to detect"

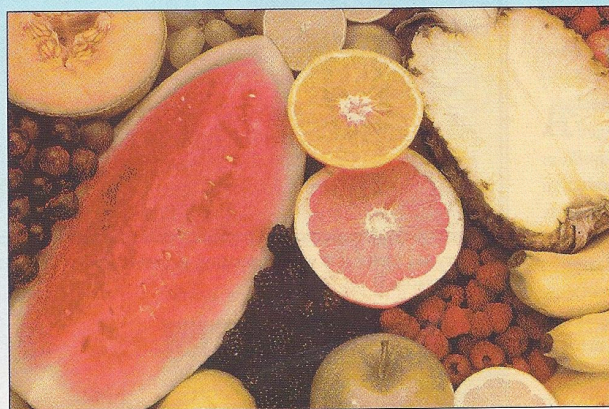
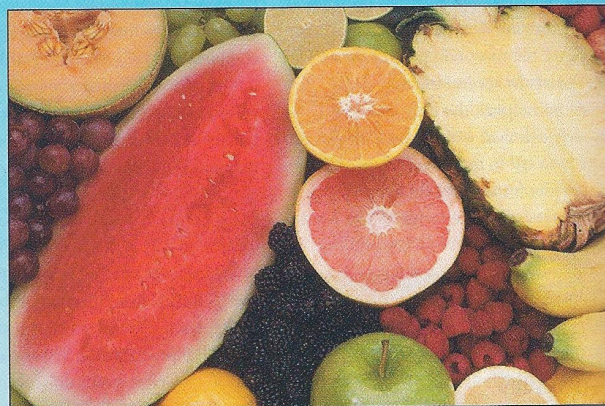
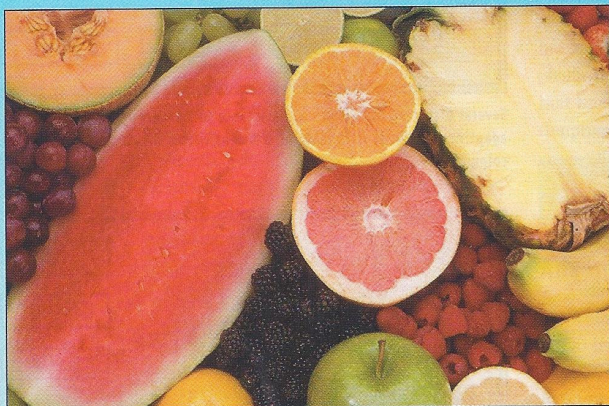


Imagecopy looks great on big screens.

Imagecopy

Imagecopy 4 costs £34.95 from FaST Club, 7 Musters Road, Nottingham NG2 7PP or telephone (0115) 945 5250. The PhotoCD capable version costs £39.95 (to cover the licensing cost to Kodak).

Textstyle is included free with Imagecopy 4 and upgrades are available from earlier versions. Upgrades from Imagecopy 2.x, for example, cost £17.95. Imagecopy works on any Atari although 1Mb or more is strongly recommended.



24bit.tif (top left) + 256.tif (top right)
+ 16.tif (bottom left)

The true-colour image on the (top left) was displayed with Imagecopy, using an adaptive palette and Talya dithering in 256 colours (top right) and 16 colours (bottom left).

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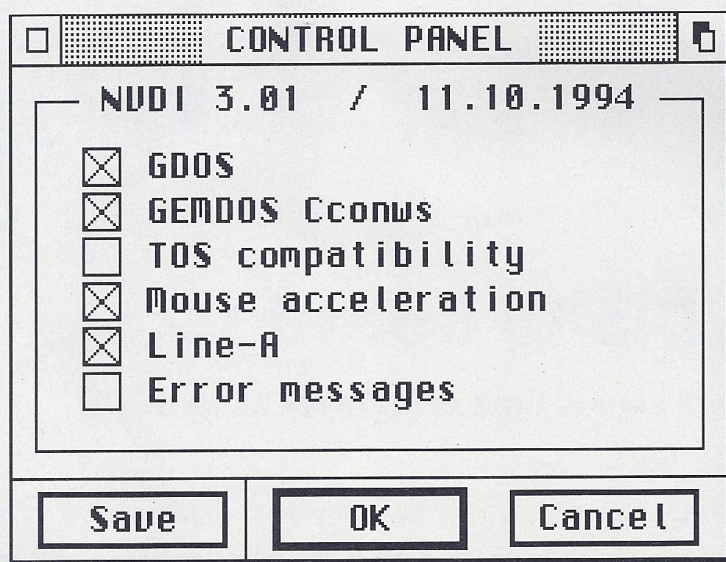
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TELEPHONE SUPPORT FOR ALL CUSTOMERS

NVDI

Ofir Gal
takes a
look at an
all time
favourite...



The main configuration. These are the best settings in most cases.

The New Virtual Device Interface, better known as NVDI has been with us for a while. This is without a doubt the program you must have on your system, unless you only use it to play games. NVDI can transform your old ST from a slow train to a racing car. But what does it do and how can you make it work even better?

TOS - the Atari operating system is the program that runs in the background and makes most things happen. The biggest job of TOS or any other operating system is to manage input and output. The mouse and keyboard are examples of input devices, a printer is a typical output device.

Some devices handle both input and output. Disks for example can be read and written to. The monitor is also an input device and large parts of TOS are responsible for most of what you see on screen. The vast majority of programs utilise TOS to display text and graphics and are therefore dependant on TOS when it comes to display speed.

The VDI is the part of TOS that is responsible for the display of text and graphics in GEM programs. It also plays an important part in printing and the display of menus and dialogue boxes among other things. The VDI amounts to approximately a quarter of TOS. It was written over 10 years ago and has not been upgraded or optimised since. It is slow and suffers from bugs. And just to rub it in, its printing extension, GDOS, is notoriously problematic.

Ring in the new

NVDI, on the other hand, is the complete opposite. Since its launch in 1990 it has seen several major updates and now stands at version 3.02. It was written to completely replace the old VDI with highly optimised code. It also replaces GDOS - version 3 adds the complete SpeedoGDOS features set to your system. With it you can use both Speedo and Truetype fonts in programs like Papyrus or Atari Works.

NVDI replaces each and every VDI function, from displaying text and scrolling

it to printing graphics. NVDI implements additional functions that enable programs to process an image in the background. The authors even provide a significant part of these functions as a free program called Enhancer so that users don't have to own NVDI. Their hope was to see more programs make use of this much needed feature. The number of programs that utilise this is currently very small. The co-operation between the authors of NVDI and Papyrus may mean the long-awaited version 4 of Papyrus will make good use of the extra features NVDI has to offer.

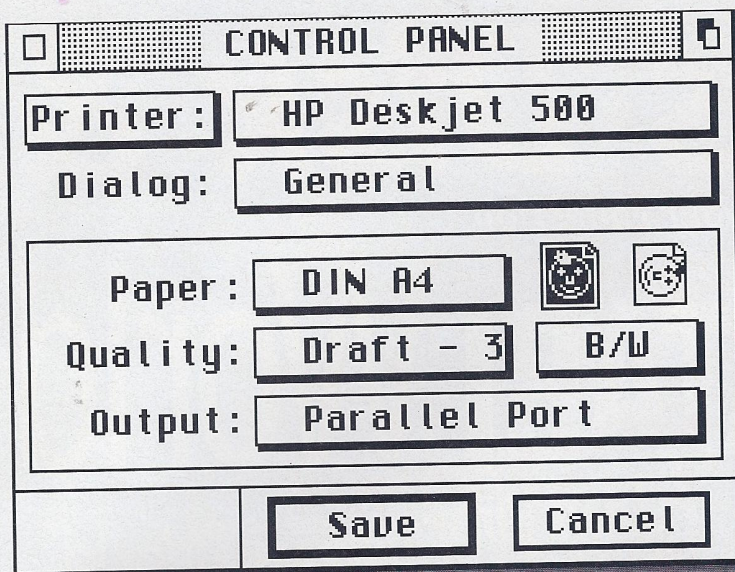
NVDI accelerates screen display by up to 10 times for certain function. On average, NVDI is three to four times faster than Atari's VDI. However, when running programs the improvement is less drastic because most programs spend some processing time doing other things than pure screen display.

Configuring NVDI

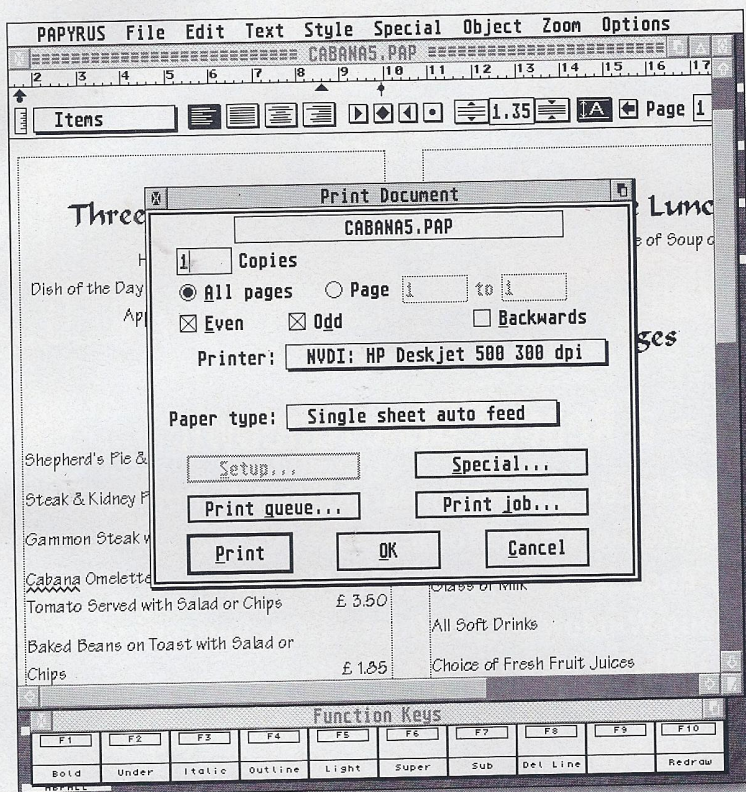
NVDI comes with a selection of control panel modules and several utilities to help you customise it. It's best however to use the control panel CPX modules for setting it up.

The first CPX is called NVDI Config. It is found in both versions 2.5 and 3 and gives you control over the basic features of NVDI. Because NVDI replaces the VDI instead of just tweaking it like other accelerators, it cannot be switched off on-the-fly. The first button, GDOS, let you enable or disable GDOS fonts and printer support. In version 2.5 this means a basic GDOS support allowing you to use non-scaleable fonts on screen with applications such as Everest or connect. It also enables printing in applications that depend on GDOS like STraight FAX.

In principle, NVDI's GDOS should work well with Timeworks, but unfortunately it doesn't. If you are using Timeworks, your best bet is to keep the GDOS.PRГ that came with the program. If you make sure that it loads "before" NVDI, the latter will



In this dialogue box you can select the printer to use. Normally this would be your standard printer, but sometimes you may find it useful to generate an image file instead of printing it. This could be used for faxing for example.



Papyrus is probably the application that makes best use of NVDI 3. Even so, it still has problems printing via NVDI in colour modes.

sense this and not enable its own version of GDOS. In this case the GDOS button in the control panel will be greyed.

The second option, GEMDOS Cconws, will be only obvious to programmers. What it does is to enable acceleration of text output in TOS and TTP programs that do not use the VDI. TOS compatibility is there to emulate a few TOS bugs. This should normally be disabled unless you come across programs that display text at the wrong size.

Line-A should normally be enabled. This provides better compatibility with old programs that use the Line-A functions in TOS. If disabled, such programs will misbehave or even crash. Although Atari asked programmers to avoid Line-A functions, they still used them for speed. The last entry, Error messages, is mostly useful to programmers. If enabled, NVDI displays an alert box whenever a program makes incorrect use of the VDI.

NVDI font configuration

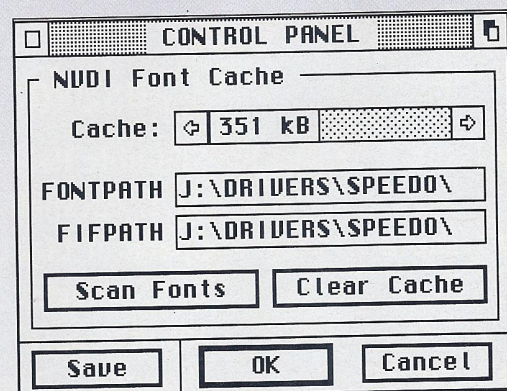
In version 3, Speedo and Truetype fonts support was added. NVDI allows you to use old-style GDOS fonts alongside scalable vector fonts. It provides printer support via new-style drivers. Modelled on the Papyrus driver system, and in contrast to GDOS and SpeedoGDOS, it is simple, fast and user configurable. The NVDI Font Cache CPX is where you set the size of the font cache and the fonts path. The settings in this CPX are saved to the file NVDI.INF which is found on the root directory of your boot drive (normally AA or CA).

The first parameter is the font cache size. Calculating the optimum value is a futile exercise. As a guideline, set it to 100-200K for a 300 dpi printer or at least 500K for a 720 dpi one. There's no harm in setting it to lower values if memory is short, it will just make printing and display of fonts a little slower.

The font path is pretty straightforward. There are three useful things to know about it. First is that NVDI looks inside any immediate sub-folders within that folder. This is useful, because you can group your fonts into families, each within a folder. Also, if you create a folder called HIDE inside the fonts folder, NVDI will ignore the fonts in that folder. Finally, you can specify more than one fonts path, which is very useful for adding fonts on a CD ROM for example, but you have to dig into the NVDI.INF file for that. You can load the file into any text editor. Look for the entry called FONTPATH, you can add more paths below it like the example below:

```
FONTPATH = C:\FONTS\
FONTPATH = P:\TRUETYPE\
```

The Fifpath is used by NVDI to store information about the fonts. Make sure you have a valid Fifpath set as it speeds up the boot process. Scan fonts enables you to introduce new fonts without rebooting.



Among other things, you can use this control panel to add and remove fonts on-the-fly.

Truetype trouble

NVDI is very particular about the Truetype fonts you use. The slightest problem and it will just refuse to recognise them. There is a hidden solution to this problem. In the file NVDI.INF add the following line:

```
CHECK_FONTS = 0
```


Readers Disk &

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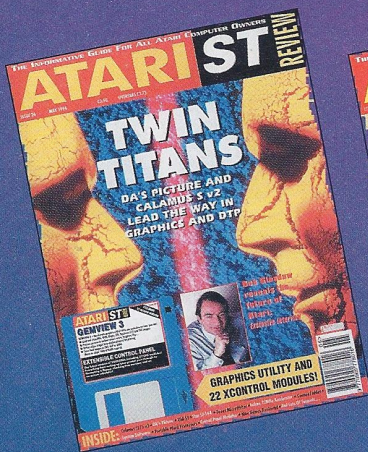
ATARI World



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- **Issue 2 (2 Disks)** Speed of Light v3.8, Bootsie v1.74, World Clock v1.0a, GDOS-Check v2.0, Maus-Window v1.32, Duet v1.0e, Vericard v1.0, Thing v0.31e, Thing Utilities, Atari **World** Profile.
- **Issue 3 (1 Disk)** Thought 2 Demo, GD-Flag v1.15, IdeaList v3.6, Fastcopy III, Kivi v1.37a, Atari **World** Profile.
- **Issue 4 (8 Disks!)** Address v2.2, AVFM v1.0, LED-Panel v3.1, Mouse23 v2.3, Atari **World** Profile, Turtle v3.2, Timeworks 2.01.
- **Issue 5 (1 Disk)** ImCon v1.1, InsChar and InsDate, Let 'em Fly! v1.3, MasterBrowse v4.9, OCR v1.4a, Text Analyzer.
- **Issue 6 (2 Disks)** Apex Media demo v2.14, Freedom v1.14a, Atari **World** Profile, BootXS v2.21 demo, Egale v2.7i, HPLJ4ENG v1.0, iPRN v1.05, Two-in-One v1.40e, WINX v2.2, GEM RAM v1.6, IKARUS v0.14, Marcel v2.3,, Kandinsky v2.02, Dirsort v1.1, SMF-Player, TWP HS-Modem v6, Disk Cake v2.1, Atari World Profile
- **Issue 7 (1 Disk)**

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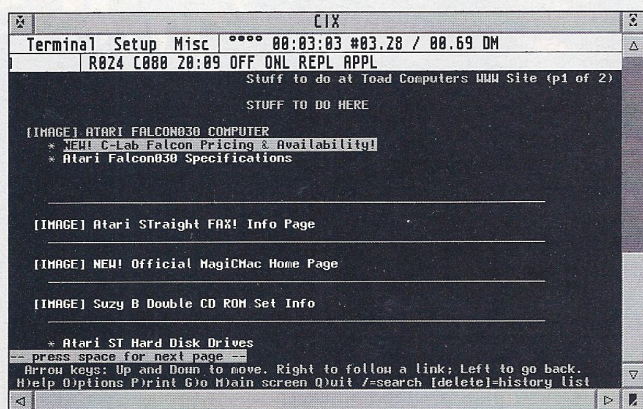
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Comms '95

A new era? Graeme Rutt kick-starts a new series about Atari comms.



Connect

Welcome to the start of a new series about computer communications. There's never been a better time to get a modem for your Atari. Fast modems are inexpensive, phone charges are cheaper, rumours of free local calls abound, direct Internet connections now cover the UK and quality Atari software is now becoming available.

This column is going to chart this new era in Atari comms - I hope those of you who already have a modem will join me and that some of you will consider getting aboard the comms train.

Terminal software

The first port of call for most Atari infonauts is normally their local bulletin board. These can be hot-beds of advice, information and useful files. Run by Atari enthusiasts on a private basis they are a cheap way of getting on-line quickly and easily. Atari based boards are spread across the country and in future articles I'll be listing as many as I can.

To use a bulletin board you'll need a terminal program. There are many available with a variety of features and prices (ranging from completely free to inexpensive). Here are four of the available terminals with a brief summary of their strengths and weaknesses.

Connect

Connect is a very fine terminal program indeed. It's a full GEM program, written to the exacting GEM standards

developed by Atari World's very own Ofir Gal and is packed full of features. Its terminal emulations are all top class, it has in-built file transfer protocols and is totally compatible with the whole range of Atari machines.

The program is totally user-definable, it has a powerful auto-dialler and an even more powerful script language. Extra features like automatic learning of scripts and a command line interpreter make this program the premier choice for power users.

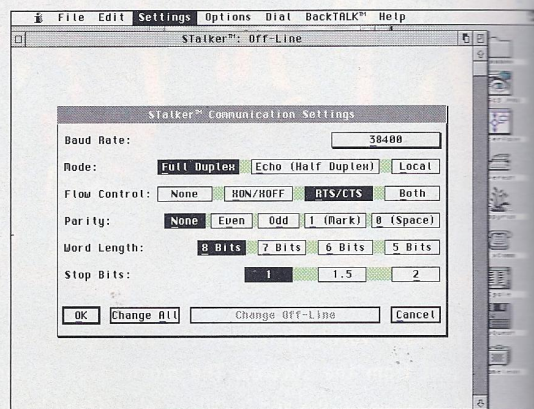
On the down side, power like this comes with a price and the program is a little slow on standard 8MHz Atari (STs and STes). People have also reported problems with the set-up, finding it cumbersome and difficult to learn, but to be honest that's all part of the territory with comms programs.

Connect is available as shareware from your local public domain library - the full version costs £30 from System Solutions.

Stalker

This was the terminal of choice of Neal O'Nions (Compo) who liked it so much he bought the UK rights. The only commercial terminal available on the Atari (at least in English), it's a GEM program with powerful features. It has an excellent range of internal file transfer protocols and good terminal emulations - although I have had one or two slight problems with some of them.

Stalker comes to the fore with its auto-dialler, which is top class. It has a



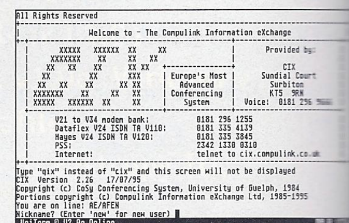
Gribnif's Stalker

slightly non-standard interface but this non-fussy approach to the GEM standard results in a small speed increase over Connect.

Whilst having an excellent script language, scripts do need to be compiled - which is a little off-putting for novices. Stalker is let down a little in the bells-and-whistles stakes with very little extras - not even an auto-script builder.

The program costs \$34.95 and is available direct from Compo.

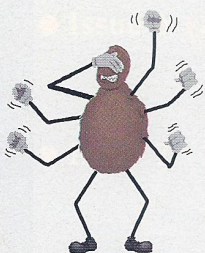
Uniterm

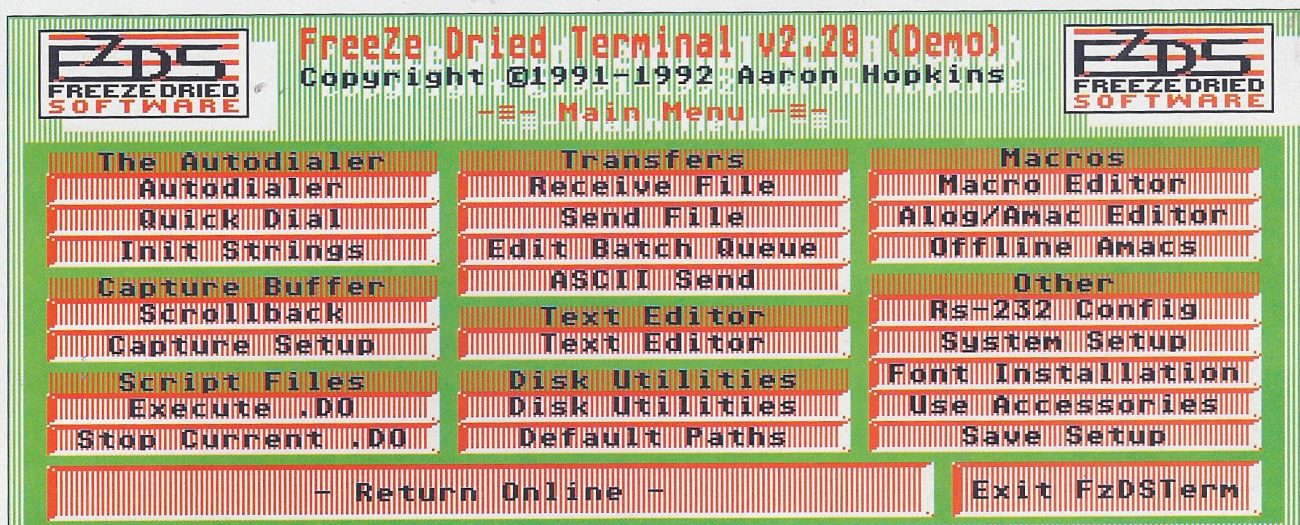


Uniterm - an old favourite.

Uniterm is the great-grandpappy of Atari terminal programs - but if you want a hugely stable, easy to set-up and use terminal that's as fast as greased lightning then maybe it's one to consider. It's a two-tone program with the terminal running under TOS and the set-up page under GEM.

In fact, for all its ugliness and non-standard approach to life (standards didn't exist when this one was written) it can at least hold its own up against the big boys - especially when you consider that it's free. It has a good set of emulations, some of





The Freeze Dried Terminal

the older file transfer protocols built in and even a (pretty basic) script language.

Where it falls down is in its age - the TT and Falcon were but a glimmer in Uncle Jack's eye when this came out - and it just doesn't work properly on non-ST screens. It also has no support for port speeds greater than 19,200 bps - a big problem for data compression modems faster than 9,600.

Uniterm is freely available from almost all public domain libraries.

Freeze Dried Terminal

Freeze Dried Terminal (also referred to as FDT, FzT, Fizzy and all kinds of other affectionate nicknames) was an attempt by the author Aaron Hopkins to write a high speed terminal for the, then standard, SMHz Atari. He threw out GEM and TOS almost entirely and wrote his own graphical user interface system. The result is a very fast, very non-standard terminal which is still a big favourite for those with ordinary SMHz Ataris.

It has a good range of features including a decent dialling directory, all the correct emulations and even some clever stuff like auto-learning of login macros and its own built-in text editor. Unfortunately it only has a basic script language and built-in support for older file-transfer protocols only. Like Uniterm this terminal has problems with age. Although it works, it isn't very happy in extended Falcon resolutions (the colours are incorrect) and the port speed may only be set up to 19,200 bps. FDT is available from most public domain libraries.

Jargon Jogger

Emulations - to spruce up the dull text-only bulletin board, schemes were devised to send special characters that would change the colour and appearance of the text. These schemes are known as emulations. Two of the most popular are ANSI and VT-100/2.

File Transfer Protocols - many different methods of sending/receiving files have been created over the years. These 'protocols' vary in the speed and safety that they can transfer files. The most popular by far is the ZModem protocol.

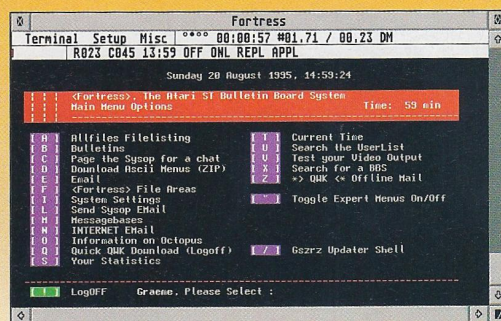
Auto-Dialler - one of the most important jobs your terminal must perform is dialling up different bulletin boards. An auto-dialler makes the process simplistic by enabling you to store a list of your favourite boards - click a button and it dials automatically.

Script Language - many terminals include a script language which (if you can program) enable you to write small programs that can interact with data sent to your terminal.

Auto-learning - if your terminal has auto-learning then you can build up a script simply by typing into your bulletin board as normal. The best example of this is the log-in script - you log in once by hand and your terminal learns which responses you make to the various log-in requirements (name, password and so on).

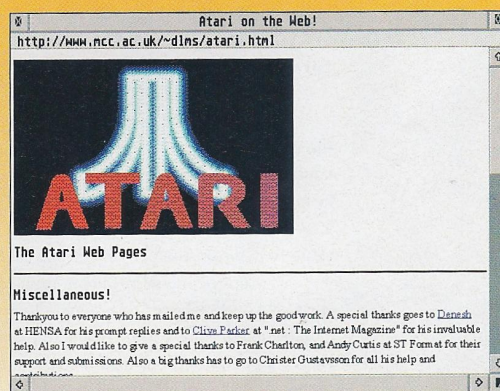


BBS of the month



The Fortress BBS - one of the best Atari boards around. Fortress, on 0181 244 9825 is one of the best Atari boards in existence. It takes all the major network message areas, has loads of files and an extremely helpful sysop in the form of Kevin Osbourne. Recommended highly.

Web site of the month



Mark Smith's UK based site is the central hub of all things Atari on the Web. It's a well maintained, fresh site that should be your first port of call on your Web travels. Point your browser at <http://www.mcc.ac.uk/~dlms/atari.html>

Never mind the language

Filling in forms can be fun!

Jon Ellis looks at dialogue box programming...

Getting dialogue boxes working in your programs is pretty simple, so it makes a good place to start a survey of the fundamental GEM set pieces. The basic routine for displaying dialogue boxes as found in any GEM tutorial or example source code looks something like this:

```
form_center(box,&x,&y,&w,&h);
    form_dial(FMD_START,0,0,0,0,x,y,w,h);

form_dial(FMD_GROW,x+w/2,y+h/2,20,20,x,y,w,h);
    objc_draw(box,0,9,x,y,w,h);
    exitobj = form_do(box,0) & 0x7FFF;
    (box+exitobj)->ob_state &= ~SELECTED;
    form_dial(FMD_FINISH,0,0,0,0,x,y,w,h);

form_dial(FMD_SHRINK,x+w/2,y+h/2,20,20,x,y,w,h);
```

An easy mistake to make is to forget the AND operation on the return value from form_do(). If a dialogue box is exited by double-clicking on an object with the TOUCHEXIT attribute, form_do() indicates this by setting bit 15 of the returned word. This possibility must be taken into account before processing the value to determine which object was used to exit the box.

The routine includes calls to provide the expanding and shrinking outline boxes that signal the appearance and removal of a dialogue box. Many users dislike these effects as it slows down program operation, so it makes sense to allow them to turn the outline boxes off. This can be done easily and neatly by having a global variable, say "zoomboxes", whose state is set via an options menu or dialogue. The variable is then tested as part of the dialogue box code:

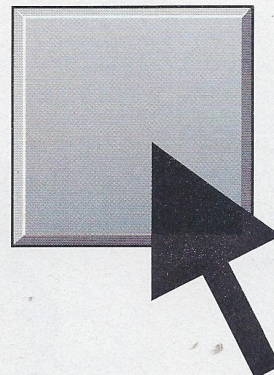
```
if (zoomboxes == TRUE)
    form_dial(FMD_GROW,x+w/2,y+h/2,20,20,x,y,w,h);
```

Another variation that may make life easier for some users is not to centre the dialogue box. If the program is being run on a

large screen or with a virtual screen, it may be awkward if the dialogues all appear in the middle of the screen, a long way from the menu bar. To give some flexibility for these users, you could make the dialogue position approximately track the mouse pointer. To do this, use graf_mkstate() to determine a suitable position for the box, taking into account the dimensions of the box and the edges of the screen. The new x and y values are then simply written into the ob_x and ob_y fields of the root object of the dialogue.

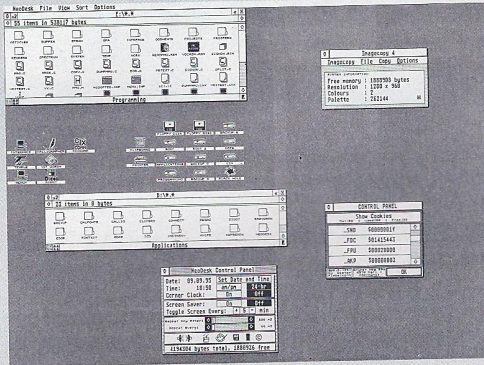
It's still worth calling form_centre() though before doing this, because in addition to calculating a centred position for the box, it also determines the width and height of the dialogue, taking into account any external borders. These values are needed for the objc_draw() call. Once again, the choice between centred and tracking dialogues should be offered to the user, as for the outline boxes.

In the next article of this series, we'll look at some tips for getting data in and out of dialogue box fields and for animating complex dialogue boxes.



Tech tips: How big is the screen?

When you're designing a GEM interface one of the key things to remember is the variety of screen sizes available on the ST and Falcon. What looks like a beautifully balanced dialogue box on your monitor may be a real mess on someone else's system, with text overlapping and icons distorted. Obviously your program cannot cater for all possible displays that can be created by third-party graphics cards and screen expanders, but with a little defensive programming it can handle them sensibly.



Your program may need to cope with some really odd screen displays!

The first step for a program to take is to identify the resolution and colour depth of the display. In the early days of ST programming, many authors used the XBIOS call Getrez() to determine which of low, medium or high resolutions was in use. The number of colours and the screen dimensions were then simply looked up in a table. This approach worked as long as only the standard video modes were used, but fails miserably on the Falcon.

The routine below should give correct information on all machines, as it uses the VDI enquiry function `vq_extnd()` to figure things out:

```
vq_extnd(handle,0,work_out);
screen_width = work_out[0] + 1;
screen_height = work_out[1] + 1;
vq_extnd(handle,1,work_out);
screen_planes = work_out[4];
lut = work_out[5];
if (lut == 0 && screen_planes > 1)
true_colour = TRUE;
else true_colour = FALSE;
colours = (1 < screen_planes);
```

Once the data has been gathered, your program can make some decisions. If the total screen area is insufficient to run sensibly, display an explanatory alert box and exit. Many programs require a minimum of 640 horizontal pixels, ruling out ST low resolution mode. Similarly, your software may need a minimum number of colours or even to run in a true colour mode.

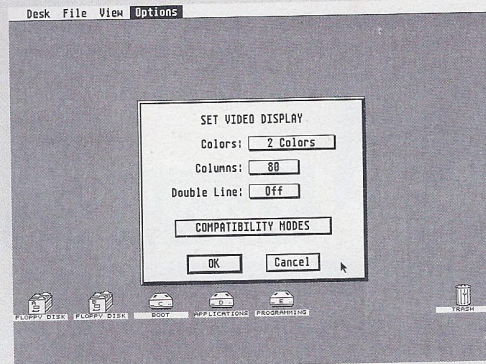
Once these basic hurdles have been passed, your program can use the data to make more subtle changes to make the most of the display. For example, a program might have two menu bars: its normal one and a special abbreviated version for modes with low horizontal resolutions.

A particularly useful form of analysis is to look at the *aspect ratio*. This is simply the width of the screen in pixels divided by its height in pixels. Aspect ratios around 1.3 to 1.6 produce natural-looking, square pixels on the screen, as in ST high and low resolutions. The strange ST medium resolution mode has an aspect ratio of 3.2, causing icons designed for more normal displays to appear stretched. To counteract this, your program could switch between two sets of icons optimised for different aspect ratio ranges.

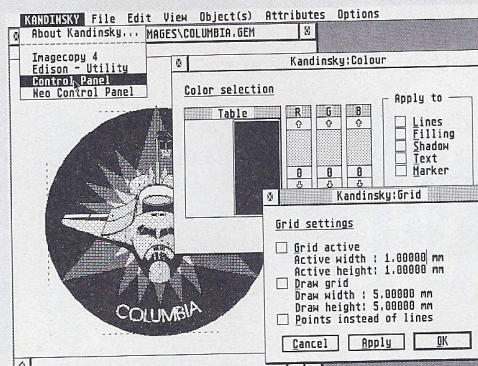
Background briefing: modality

Read through the documentation that accompanies a recent application program, and chances are you'll come across the phrase 'non-modal dialogues'. What are they, and what's so great about them?

When a normal dialogue box, like those used by the desktop, is displayed, you have a limited range of possible actions. You can manipulate fields within the box, but nothing else - no drop-down menus, no desktop icons and no other dialogues. This restriction continues until you click on one of the exit objects for the dialogue box. In general, any ongoing processing is also put on hold until the dialogue interaction ends. This suspension of program interface and processing is termed a 'mode'. Compare this with the operation of a non-modal system, such as that used by Papyrus: not only can you operate menus and window scroll-bars while a dialogue box is open, you can even have several dialogues open at once!



The Desktop uses old-fashioned modal dialogues.



Kandinsky shows what non-modal dialogues can do...

Modal dialogue boxes are a real pain under multitasking systems like MultiTOS, because while they are open you cannot get at the menu bar to switch between applications. To get away from this behaviour requires a major rewrite of the way that dialogue boxes are handled.

Briefly, the modal property arises from the implementation of the `AES form_do()` routine. By rewriting this routine to cope with menu selections and events outside the dialogue box itself, a more multitasking-friendly non-modal operation can be achieved.

Since in a non-modal environment, the dialogue box no longer has exclusive control over the screen, the new `form_do()` must be prepared to cope with redrawing the box if it gets overwritten by a desk accessory or the like. The cleanest way to do this is to draw the dialogue in a simple GEM window, with just a close box and a mover bar. Writing a non-modal `form_do()` replacement provides a great opportunity for incorporating other advanced user-friendly features into the new routine too. As a result, many implementations also allow dialogues to be movable and contain keyboard shortcuts, new object types and so on.

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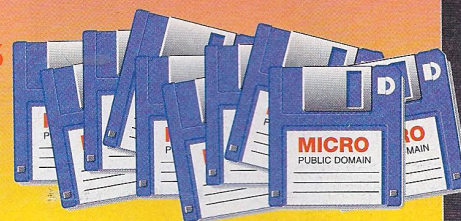


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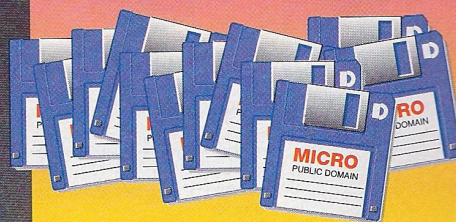


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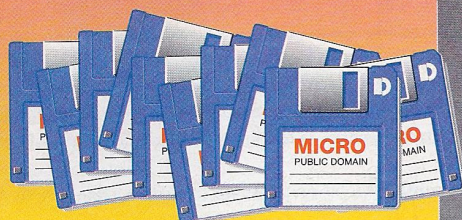


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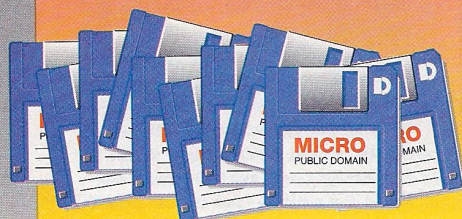
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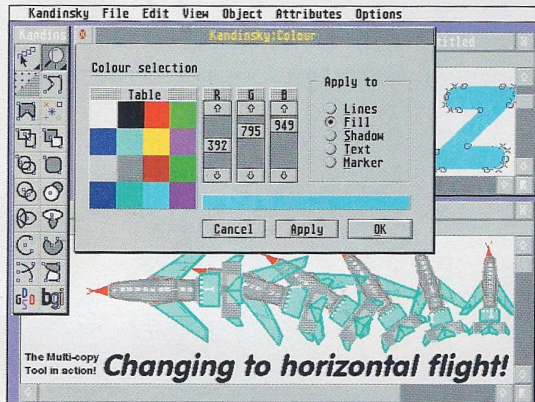
News

I asked Christoph Zwerschke about the virtual village in Ikarus, called Kamen. Apparently it's an infamous German motorway intersection. This idle chitchat has led to a tongue in cheek 'International' version which checks the _AKP language cookie then selects an appropriate town name and makes sure the cars drive on the right (as in correct!) side of the road. This version now features filled objects and we've managed to squeeze it onto this month's Reader Disk.

The DBA (Disk Busters Association) will soon be releasing two new Falcon only disks (Issues 13 and 14). Both should be available by the time you read this.

Stosser, the disk magazine for STOS programmers, has risen from the ashes yet again. The original mag died when Tony Greenwood gave up due to lack of contributions. Two months later Bob Godfellow resurrected it only to give up due to other commitments. The new editor is Dean 'Deano' Sharples of Silly Software and he has managed to release Issue 24. It's now available on-line and from the usual libraries. In future Stosser will be produced on an irregular basis and Deano has appealed for contributions. Contact Dean Sharples, 27 Turbary Walk, Milnrow, Rochdale, OL16 4JN for more details.

A year after the collapse of ST Handbook/IDS, their flagship title HERO has been re-released by its authors as freeware, again available on-line and from the usual libraries.



Kandinsky is back, with a new look and dozens of features to explore

Kandinsky v2.02

Shareware • all Ataris



Kandinsky is a vector art package that creates GEM metafiles

ideal for inclusion in DTP packages. Unlike bitmap formats, metafiles can be re-scaled to any size without suffering the 'jaggies' or loss of detail. Kandinsky has a pedigree dating back to 1993 with regular updates culminating in this release which features a sporty 3D-look with 256 colour, 030 and maths coprocessor support.



There are dozens of new features to explore. I spent hours evaluating the powerful Distort and Multi-copy functions which semi-automate the creation of complex designs. A new Outline mode turns fills off resulting in faster screen redraws and easier editing of overlapping objects. Interruptable redraws means drawings can be edited faster, especially on slower machines.

Kandinsky requires GDOS to save and print drawings. Using SpeedoGDOS or NVDI3 enables vector fonts to be included in drawings which can be converted to filled Bezier objects and edited to create custom characters. The registered version joins only a handful of programs which can import Calamus CVG files making Kandinsky an attractive

alternative to expensive commercial alternatives.

Updated support for external font selectors, Freedom, iconification, drag and drop and the AV protocol means Kandinsky is a cutting edge application on the Atari platform. Context sensitive hypertext help in ST-Guide format is available in all dialogues via the Help button. Kandinsky costs £30 with the earlier v1.73 remaining available at £16 to provide an entry level and upgrade path.

JC



Misinformation?

I recently joined the NeST conferences via 42BBS and realised there's a popular misconception that all the software in Public Arena is sourced exclusively from Floppyshop and Goodman.

In fact all the contributors (myself, Danny Bhabuta and Carl Lofgren) source their own material - a percentage does come from the libraries, and we're always grateful for their help, but much of the software is culled from the Internet or directly from the authors.

We always pass copies of everything reviewed to Floppyshop and Goodman because both libraries offer an excellent service and we can be sure you'll easily be able to track down a copy of anything we've reviewed. So if you've got some software you'd like reviewed or included on the Reader Disk, now's your chance!

Joe Connor

Send software to: Public Arena, 65 Mill Road, Colchester, CO4 5LJ

All the software (unless otherwise stated) can be sourced from:

Floppyshop:

P.O.Box 273, Aberdeen AB9 8SJ
(01224) 312756

Goodman:

16 Conrad Close, Meir Hay Estate, Longton, Stoke-on-Trent ST3 1SW
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P.O.Box 2, Heanor, Derbyshire DE75 7YP
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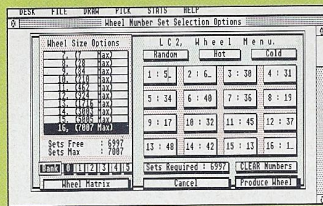
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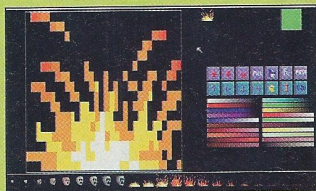
Lottery Companion v2.0

Since the earlier review in Issue 5 Mark Butler has been busy improving the calculation speed, adding more stats options and convenience features to make it easier to get the data in and edit it afterwards. The ability to display the number frequency as an 'ASCII art' bar graph is welcome and it's much easier to understand than staring at the raw data. Two things haven't changed - your odds of winning and the registration fee which remains at a fiver.



Spooky sprites v4

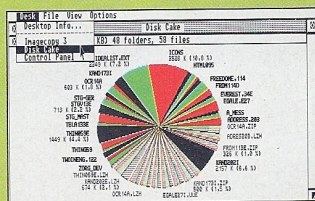
Spooky sprites can create and edit true colour sprites for use in your own programs such as STOS, and GFA Basic. All the tools to create sprites from scratch are included along with options to clip them from existing images in Targa 24-bit type two, TRP 16-bit true colour, Raw data 16-bit true colour, Neochrome 16 colour, Degas P11 16 colour and others. Sprites may also be animated and saved in raw data, uncompressed or compressed formats.



Disk Cake v2.1

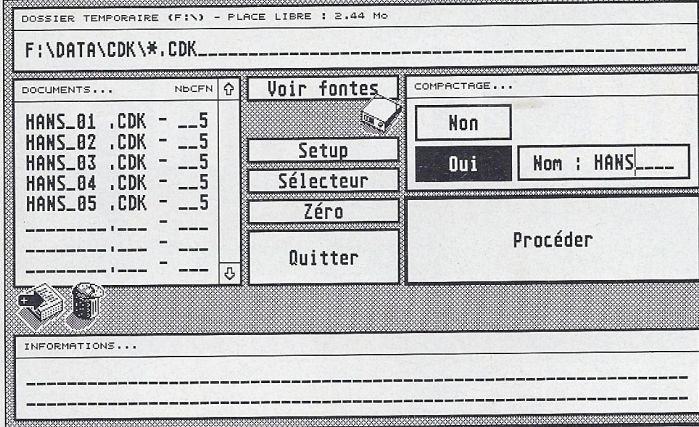
Disk Cake is a unique graphical file manager which runs as a program or desktop accessory (by renaming the extension). We reviewed v1.7 in issue 2 but experienced a few problems. Happily this version works perfectly making the transition from an interesting curiosity to a useful utility on my system.

Click on any folder to display its contents, click on any file to display its info dialogue and double click on any file to send an AV message to any AV Server (Thing/Gemini/Ease/Neodesk) which can then display files, run programs, open windows and so on.



Pack-CDK

©1994, Atelier Ph.GALMEL - v1.2



Much to my chagrin Pack-CDK is French - but a few minutes in a RSC editor soon fixed that!

Pack-CDK v1.2

Shareware • all Ataris



If you're a Calamus user, Pack-CDK offers the perfect way to send Calamus files to a bureau or another machine for output. Pack-CDK outputs either a folder or LZH format archive containing the selected documents, all fonts used and an ASCII comment file, with printing instructions, for each document.

Don't worry about the French front end, it's obvious what to do and after a few minutes tinkering, voila - a complete package ready to dispatch. Here's a brief outline of the procedure:

In Setup enter the paths for your documents and fonts followed by your contact details. Back at the main screen select the destination path (at the top of the dialogue) followed by the desired documents. Select Oui in the Compaction box, to create an LZH archive, otherwise select Non, then Proceed. Each document is processed in turn, any fonts used are automatically copied to the destination folder. If a font isn't available you're given a chance to select a replacement. After each document has been processed a comment dialogue is displayed where output options can be selected from a series of popups or typed in. The preset options include film or bromide, the colour separation, dpi, density and page size.

JC

Maggie Issue 18

Shareware • all Ataris



The Maggie disk magazine has celebrated its fifth birthday by launching a new issue with a completely rewritten shell which takes advantage of the Falcon's extra capabilities. An ST version, using the old Delta Force shell, is also available and both versions will run in parallel for the foreseeable future.

The intro plays a Kraftwerk soundlike techno track over white on black shock and fade titles mixed in with animated sequences of a ray-traced torus before cutting to the main screen. While the scroller (to use the editors own words) displays 'utter mindless crap' you can select from the slick icons and call sub-menus to select articles to read.

The text displayer is silky smooth with text scrolling over a moving starfield. Text can be scrolled a line or page at a time using the mouse or keyboard and everything works as you'd expect, it's intuitive. There's an icon to return to the main menu, another to access the options screen and a glowing icon if a picture accompanies the article. The options screen displays floating menus over a psychedelic background. Options to toggle the starfield and



music on/off, save articles as ASCII text, select between ten screen fonts, select colours and set the volume are included.

The articles all appeared original with Atari related news, reviews and gossip along with dollops of music, film and idle chitchat, something for everyone and at least several hours reading.

There's even a Donkey Kong game to play and a hidden screen which can only be accessed after correctly answering a series of questions - which I couldn't!

JC

Explorer 32

Shareware • all Ataris



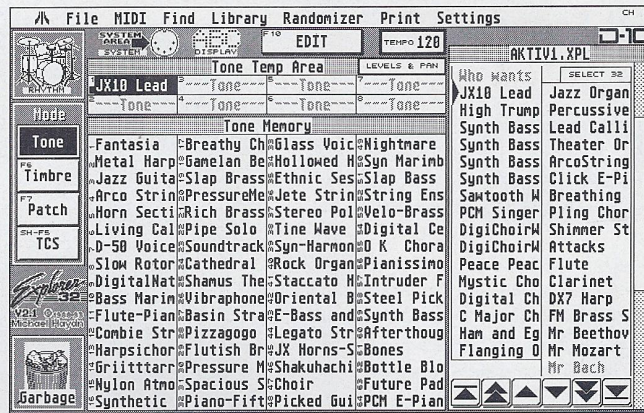
The former commercial editor, C-Lab Explorer

32, has been re-released as shareware at a fifth of its original price. Explorer 32 is a fully featured editor for the Roland MT-32/100, E-10/20, and D-5 to D-550 range of synthesisers. Due to some smart programming it can also be used to convert patches between all those models.

As most synthesisers offers many hundreds of parameters, it's often impossible to fit everything on a single screen. Some editors solve this problem by dividing the parameters into several pages, while others uses a scrollable window. Explorer 32 uses a slightly different approach, by scrolling the complete screen over a virtual area. When you are used to this method, editing can be very fast.

The program also contains a randomiser where you can create completely new patches or variations of existing patches. Perhaps not the best way to create useful patches, you might think, but it's really helpful if you are short of ideas or inspiration.

The library is where you store all your



The main screen of Explorer 32.

patches with matching descriptions. It allows you to sort, delete duplicates, find double names and search for patches with matching descriptions.

If you are an owner of any of the above listed models, Explorer 32 is definitely worth getting. It's commercial quality at a shareware price. The only drawbacks about Explorer 32 is that the development has stopped, no further versions will be released, and it won't run on Falcons or TTs.

CL

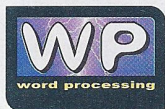


Exchanging files between word processors and platforms is easy with Marcel.



Marcel v2.3.4

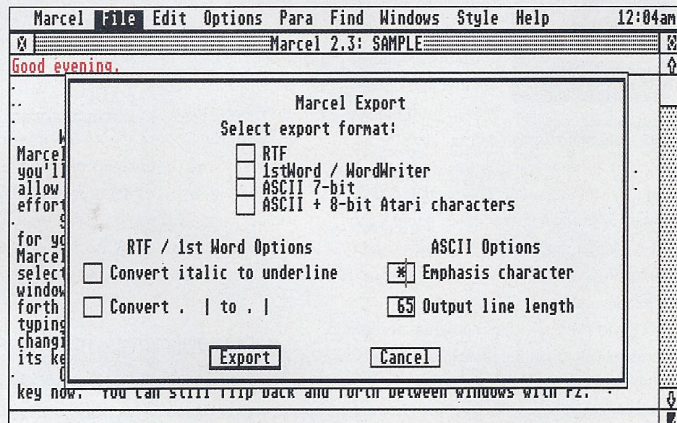
Shareware • all Ataris



Once a commercial word processor, Marcel then became shareware and is now completely free. This is

very good news because for the price of a floppy disk you can now have a very powerful and user friendly GEM based program that leaves other PD word processors standing!

Marcel works under all TOS versions in medium resolution or better, and requires only 512K. It also works well under multitasking systems. What makes Marcel extra special is that apart from containing features you would expect from a word processor, it can save and load RTF (Rich Text Format) files. RTF files



hold font and style information so when you load it into another word processor supporting RTF, the document will look the same as under Marcel.

Marcel has lots of other features including auto-reformatting, instant-access writer's note pad (saved, but not printed), and easy accented-letter entry. And along with support for printers from dot-matrix to laser, Marcel also gives you PostScript output! What's more, Marcel comes with a huge dictionary for spell checking: a facility missing from many commercial word processors.

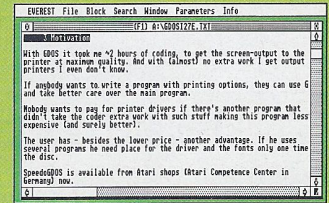
You can order a 30 page laser printed A5 manual for \$5 which covers many things not in the text manual on disk. It also gives you many handy tips to make the best out of using the program. Whether you write occasionally or frequently, Marcel is highly recommended.

DB



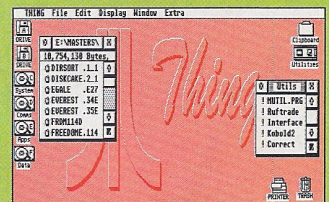
GDOS FAQ

If you're struggling to understand GDOS, printer drivers, and font formats this text file is an invaluable reference source for programmers and users alike. It's regularly updated with sections on every aspect of GDOS, including sections on GDOS, FontGDOS, SpeedoGDOS, NVDI, lists of available screen, memory, Metafile, dot matrix, inkjet and laser printer drivers and suppliers along with descriptions of bitmap, PostScript, TrueType and Speedo font formats.



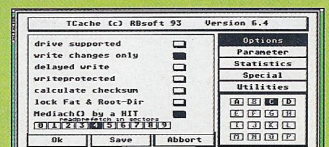
Thing v0.59e

After a rapid development phase this is the last freeware release before Thing becomes shareware at v1.0. It's an excellent upgrade compared to v0.31 which featured on the Issue 2 Reader Disk. Some of the nicer new features include group windows, which create alias files so programs can be conveniently stored in groups away from their associated files, new Windows 95 style multi-page dialogues with 3D buttons, any size icons, enhanced Kobold, Freedom, MagiC and drag and drop support, a few starter icons for medium res users and backdrop image support for the desktop.



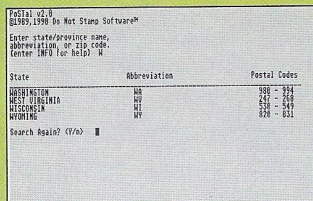
TCache v6.4

TCache is a very fast hard disk caching program for your ST. It increases the speed of disk operations quite dramatically, and a speed improvement of up to six times is the norm. TCache offers you a multitude of options to configure, making it the most flexible disk cache program available.



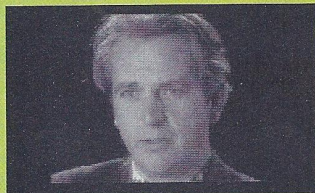
PoSTal v2.0

Postal is an area and postal code database which you can search by typing in the first character of the area name. It works very well in all resolutions and even on the Falcon, considering how old it is. It's a nice idea but not of much use to UK users as it only holds information about the US of A.



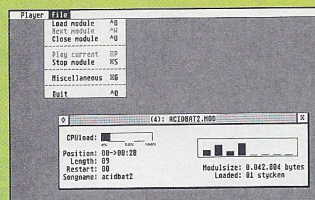
QuickTime Player v0.93

This is a simple QuickTime movie player which works in 2, 16 and 256 colours on any Atari. However results are not very good on anything less than 256 colour mode and even then movies are played back in mono and are tiny. QuickTime is a popular format on other platforms, so let's hope that there will be more updates to this program.



The MusicPlayer

The MusicPlayer is a module player from the team behind the Octalyzer tracker. It's capable of playing four, six and up to eight tracks at the same time. It runs both as a program or as a desk accessory. The STE is already overcrowded with module players of varying quality and The MusicPlayer offers no bass boost and no other similar frequency controls are available.



CD-Sound v0.26B

Shareware • all Ataris

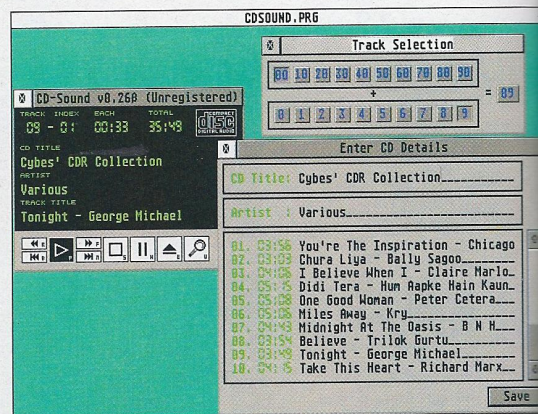


CD-Sound is an audio CD ROM player for the Falcon. A similar utility is bundled with ExtenDOS but it leaves

a lot to be desired. Others in the public domain require MiNT or MetaDOS to be installed. CD-Sound contains code to directly access the Falcon's SCSI bus and talk to the CD ROM drive so unlike its competitors, CD-Sound works without any CD driver software installed.

CD-Sound works with more audio capable drives than other players too. Wrapped in a slick interface, CD-Sound lets you adjust the text colours to your liking. The standard CD player control icons are present so using it rapid it becomes second nature. Changing between time elapsed and time remaining for the current track and the whole CD is only a mouse click away. Both caddy and tray loading drives are supported and the Eject button actually works!

CD-Sound has a database feature letting you add details of the current CD. These can



CD-Sound - listen to your fave CDs while working.



DB



Dirsort v1.1

Freeware • all Ataris • on Reader Disk



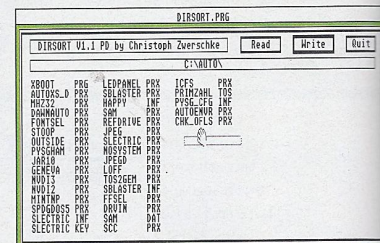
Auto folder programs are fussy. Some programs should be run first and others insist on running last.

Since only one program can run first or last there's an inevitable juggling act to establish a workable running order. The recommended method is to copy all the files to a temporary directory then back to the Auto folder again one by one but take my word for it - Dirsort is a lot less hassle!

Dirsor runs as either a program or desktop accessory (by renaming the extender) and can also be used to sort CPXs and other directories.

After launching Dirsort

automatically looks for an Auto folder on the boot drive or partition and reads the files automatically. The Read button can be used to manually read the contents of any other directory if desired. Files are re-ordered by simply dragging them to a new position using the mouse. Select the Write button to save the files in the revised order and that's it.



Dirsor can re-order the contents of any directory.

JC



New Depack v1.1

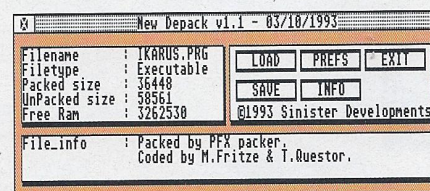
Shareware • all Ataris



New Depack is a file depacker which runs as a program or desktop accessory (by renaming the file

extension). Many programs, especially those circulated by magazines, are packed to save disk space and improve loading times when running from floppy.

Packing technology is constantly evolving (it says here) so if you're using programs packed with an outdated format New Depack can be used to depack the program ready for re-packing using a better format.



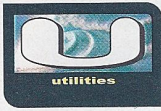
Ikarus has been correctly diagnosed as a PFX packed - this saved valuable Reader Disk space.

Programmers often pack their files to prevent casual hackers but if you fancy delving around in a program, maybe to translate the text strings for your own use, New Depack is a nifty utility to have in your toolbox. Since this version recognises 69 packers and support 126 different file formats you're in with a sporting chance!



WinCom v1.5

Shareware • all Ataris

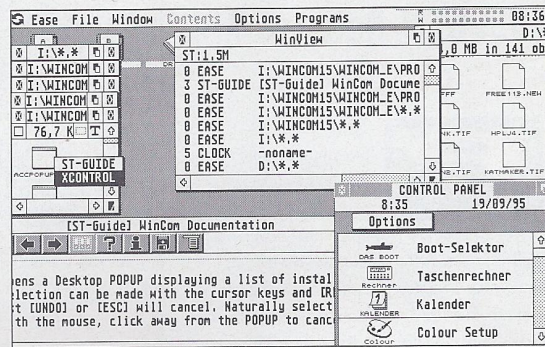


WinCom, or Window Commander does for MagiC what WinX does for TOS/GEM windows but it goes even

further. In addition to giving you better window management with certain mouse movements it lets you use keyboard shortcuts for many functions.

Windows can be updated in real-time when manipulated and they can be sent to the background by clicking on the title bar. WinCom also lets you easily hide and show all windows belonging to an application. As well as being able to control background windows, all can be moved beyond the edge of the screen. If an application makes the mouse pointer vanish you can make it visible again with a keyboard shortcut!

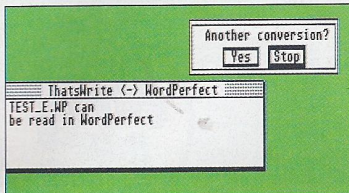
WinCom enables you to call installed accessories via the keyboard or a popup and lets you create a second Atari system



WinCom - more than a WinX type program for MagiC users.

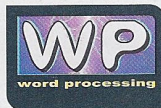


DB



TWP v2.0

Shareware • all Ataris • on Reader Disk



TWP is a small utility capable of converting documents between That's Write and WordPerfect format in

either direction. The unregistered version only handles documents up to 2Kb. In practice this is somewhere around 100 words which barely

Intelligent That's Write to WordPerfect file conversion, the only alternative is ASCII!

allows the program to be tested so you'll need to pay the \$12 shareware fee before tackling any useful documents.

The interface consists of a series of dialogue boxes which I found confusing - a single window containing all the options would have been a better way to display the global options effectively.

Looking on the bright side TWP can batch process files using wildcards and the conversion is comprehensive preserving, as far as possible, text styles, fonts, strange characters, frame characters, tables, footnotes, headers and footers.

We've been promised RTF support in That's Write for ages but until this materialises TWP is the only utility available to intelligently convert That's Write documents to any another application (and platform) without reverting to ASCII and for this reason it is recommended.

JC



Schoenberg

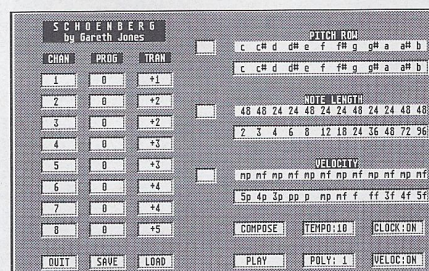
Shareware • all Ataris



Want to try a different approach of making music? Schoenberg is an algorithmic composition tool,

based around the twelve-tone composition technique. The twelve notes that make up the octave are arranged by you in a fixed order using each note only once. The composition is then built from variations of these notes and up to eight MIDI channels can be used at the same time.

Schoenberg runs in medium and high resolutions. It doesn't make use of GEM, and the interface feels a bit amateurish. This is a crying shame because Schoenberg is a very



Beneath the dull surface lurks an interesting program.

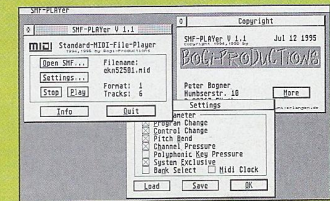
competent application. The full registered version offers the possibility to export your work in standard MIDI file format for further processing in a sequencer.

And the results? Well, Schoenberg can be used to produce some very nice ambient background music, apart from that 158 BPM Eurotechno piano break? Nah...



SMF Player

Why buy a Roland Sound Brush unit when you can use your Atari? From Bogi Productions in Germany comes the SMF Player, a standard MIDI file player capable of playing MIDI files formats 0 and 1. You can set what type of special MIDI messages should be allowed to pass through the filter (Program Change, Pitch Bend, SysEx, Pressure, and so on). SMF Player is very easy to handle and plays your MIDI files with a minimum of fuzz. Highly recommended!



The CyberStrider files

The CyberStrider

Denesh Bhabuta brings brilliant news for Atari comms users

Yes! Yes!! Yes!!! No, I'm not impersonating Meg Ryan in 'When Harry Met Sally', but you will certainly want what I'm having! It's nothing less than a complete online GEM-based World Wide Web (WWW) browser for any Atari!

Way back in Issue 3, I reviewed HTML-Browser, hoping it would turn into a WWW solution. My dreams have come true, thanks to the authors: Steve Adam for the network layer, Alexander Clauss for the web browser and Tim Newsome for the overlay file to hook the browser into the network layer.

I still have the beta versions but it should already have been released by the time you read this. It works very well and I have tested the programs with various Internet service providers, including CIX, Demon and Magnum. HTML-Browser now supports colour, with many more features planned for the future. Caching is even better than that in Netscape, in my

CONTINUED OVERLEAF

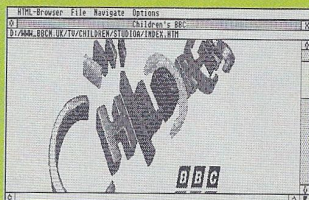
The CyberStrider files

FROM OVERLEAF

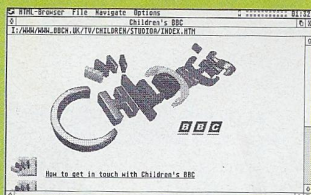
opinion. You specify hard drive space, and all pages including images get saved for you to look at off-line if you wish.

Steve Adam's network layer, Stik, is easy to setup with no need for MINT. It comes with an IRC (Internet Relay Chat) client program that lets you log on to any IRC host machine to chat in real time to various people around the world.

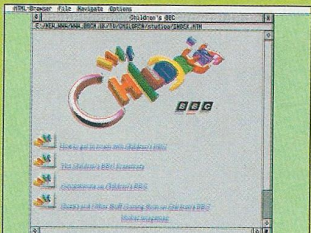
The whole package will be available for a minimum contribution of £15. Stik is only a demo of what is to come so the author is not asking for any money. He is planning on a commercial full Internet access package based on Stik. Watch this space...



HTML-Browser in medium resolution on a ST...



... and in mono high resolution under MagiC...



... and finally 256 colour web browsing on a Falcon using ScreenBlaster.

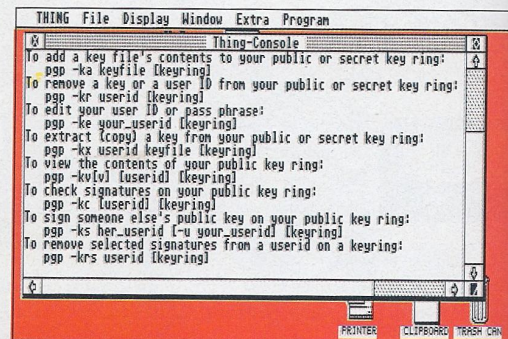
TOS2GEM Release 7

Freeware • all Ataris



TOS2GEM is a programming tool. It provides a clean and easy way for programmers of GEM shells to redirect the output into a window. Along with a comfortable cookie interface it supports full VTS2 emulation with colour and makes buffered output possible for high output speed. What's more, it doesn't use up too much memory either.

Programs need to specifically call TOS2GEM. There aren't many programs which currently do but more and more are starting to support it. TOS2GEM is freeware but contributions for its further development are quite welcome. Currently in German, an English version is just around the corner. If you are a programmer then you should



PGP output in a TOS2GEM window under EasyPGP Shell

consider using TOS2GEM to have a nice looking and easy to implement console window instead of overwriting the screen with TOS output. If you run programs such as Thing, EasyPGP or POVShell, then TOS2GEM is necessary.



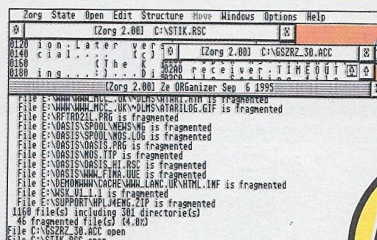
Zorg v2.0

Shareware • all Ataris



Zorg, or Ze ORGANizer is a disk and file manager. You can also use it as a hard disk defragmenter and optimiser to make the hard disk perform at its best. That's not all as Zorg has a few more tricks up its sleeve.

You change and edit binary files and sectors much like Disk Doctor. Not content with that Zorg lets you edit multiple files, all in friendly GEM windows. In addition you can change FAT entries and test the structure of a file system. It supports ACSI, SCSI and IDE drives and the TOS file system. Other file systems can be accessed with the appropriate driver installed.



Zorg - the essential tonic for your hard drive



Zorg has undergone many bug fixes in a few months and now includes a registration program into which you enter your personal keycode. The keycode will register all future versions of Zorg too. The UK support site has also changed but the good news is that the registration fee remains at £12.

DB



zControl v0.2

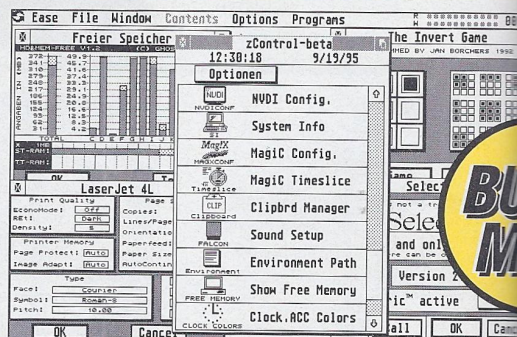
Shareware • all Ataris



Atari's XControl Panel takes up one accessory slot, but allows you to load a number of accessory-like modules called Control Panel Extensions (CPX).

zControl is a shareware alternative. Fixing bugs found in Xcontrol, it goes further by providing modern features. Unlike its forerunner, zControl lets you run up to four different CPXs simultaneously and modules can easily be activated or deactivated. Sporting a GEM interface, it can even be controlled via the keyboard! In addition it supports dag and drop, iconification and the AV-Protocol.

Currently, zControl only works perfectly under multitasking environments such as MagiC, with support for TOS planned for the



You can display more modules than XControl. The scrolling title is a nice touch too.

next update. Compatibility with older CPXs is very high. Registration is only £6 for which you receive the latest version plus that warm feeling inside. If you are a XControl user, zControl will not disappoint you.





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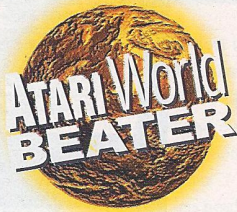
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Ozone 1&2

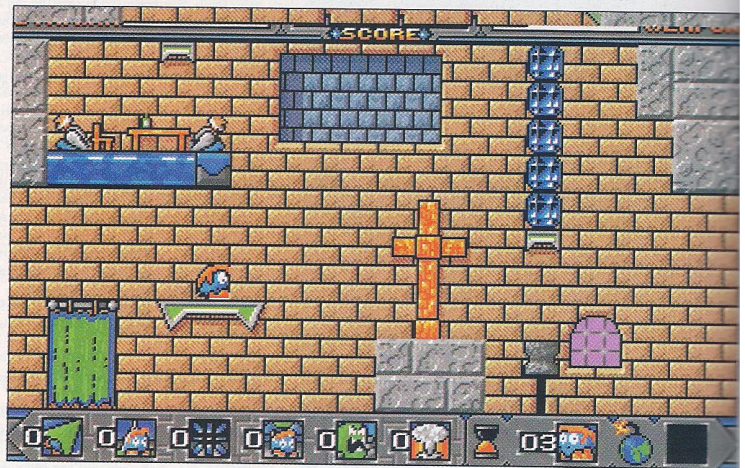
Goodman • £1.95 •
Any ST



The ST public domain packs some pretty cool games, but very few can claim to be of commercial quality; Ozone is one of the rare exceptions. Although it has been doing the rounds for some time now, this compilation disk, which includes the sequel, is quite recent and we couldn't resist the temptation to have another few games – you shouldn't either.

Ozone is a cutesy, platform affair. The overall aim is to guide a fluffy ball of fur to an arch at the top of a colourful tower, collecting as many goodies as possible along the way. You'll survive the first few stages by merely bumbling around and zapping the odd baddie, but beyond this gentle introduction lies some really devious levels; careful use of every single power-up is needed to scrape through some of the trickier bits, and a time limit adds to the frustration. The controls are precise and the the function keys are used to activate the various gadgets you collect. Technically, the game is hard to fault, with its exceptionally well-defined graphics and smooth, near-as-dammit full-screen scrolling. Touches of humour are everywhere and although there are no in-game tunes, two background music programs are supplied on the disk, so you needn't go without. The overall feel is of Rainbow Islands with more puzzles - and addiction is instant.

Ozone 2 is a natural continuation of the theme. Our hero has inherited the ability to walk along the sides of platforms and now wields maces that are a lot more efficient in squashing the sickeningly cute enemies. It is a little bit trickier to play than the original, but it's just as slick. Yup – Ozone is still the best shareware platform game on the surface of the planet and there are many hours of semi-frustrated enjoyment on this disk...



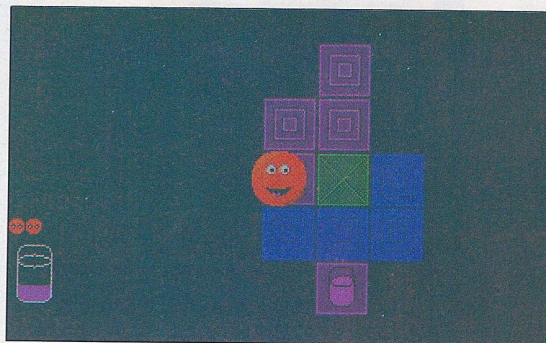
Smooth scrolling, precise controls and great gameplay – Ozone is a true classic.



Power-ups need to be used wisely in order to complete later levels...

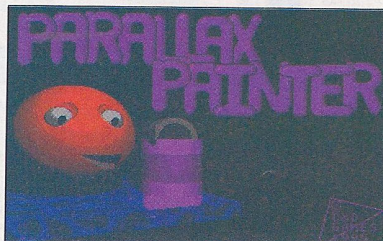


Our favourite furball inherits magnetic shoes in the sequel; the control system takes a while to master.



Teleporters and other special tiles are available to help you to complete the job.

Painter enters three dimensions! Simply paint the town purple!



Parallax Painter

Goodman • £1.95 • Any ST

Parallax Painter is the most original arcade revamp to grace the ST public domain for quite some time. It draws its gameplay from the classic Painter and the idea is to completely redecorate an intergalactic, multi-storey car park, by walking over each component tile. Liberal supplies of paint are scattered around and you can move between layers by pressing the fire button. Trampolines, teleporters, bombs and dynamite add to the action, and the danger of falling past lower levels and out into space is ever-present; the nasties seen in the original are nowhere to be seen. The semi-3D graphics system keeps up well with the gameplay and a fast-paced tune thumps along in the background throughout; the visuals themselves are a little lacklustre at times, but it's not a major problem.

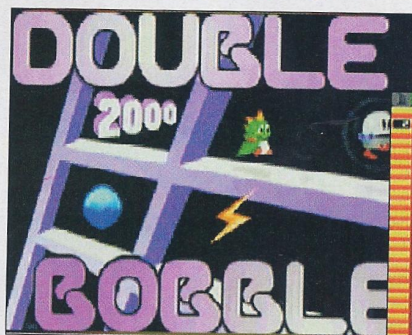
As a shareware game you can expect one or two restrictions; this release includes four single-player levels, four cooperative levels and two competitive levels. A very reasonable six quid will buy you the complete product, which contains over 120 stages!



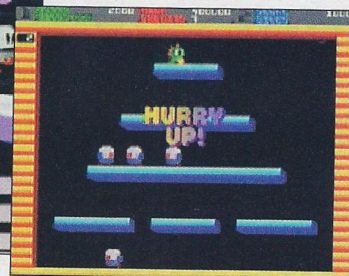
Double Bobble 2000

Goodman • £1.95 • Falcon Only

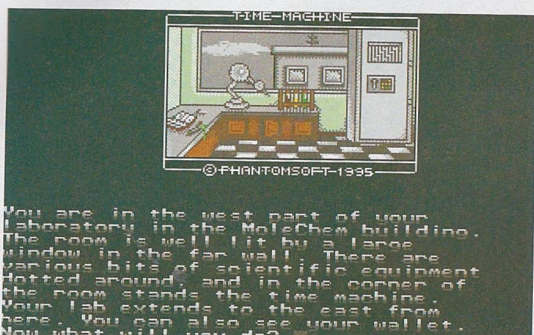
Double Bobble is a tribute to Bubble Bobble, the classic cutesy arcade game. Everything about this thoroughly Falcon-only title screams authenticity, and even the same basic music still lurks there under a wave of digitised instruments. Gameplay involves a frantic dash around a colourful building trapping monsters in bubbles and then "popping" them to reveal fruit – clear the screen and you're through to the next level; linger too long and the bad guys will become impatient. As with the original, you've got the option of lone or cooperative play (don't worry, it's perfectly natural to argue about who plays "Dub" and who "Dob"). The gameplay itself is anything but a disappointment, with smooth movement and exceptionally accurate collision detection. As you'd expect from a good Falcon game, the Jaguar Powerpad is supported and the pesky internal speaker is fully controllable through software too. The overall result, ladies and gentlemen, is a game that whips the arcade version's hallowed butt!



Two-player Bubble Bobble – game of the gods!
Double Bobble recreates the experience perfectly.



Help – I'm running out of time. Better "bubble" the remaining monsters pretty sharpish!



Cool graphics; archaic interface – Level 9 fans rejoice!

The grey text is a little tricky to read, but adjusting the contrast and brightness helps.

Time Machine

LAPD • £3.00 • Any ST

Incredible; you've achieved the near-impossible and invented a time machine! But just as you are adding the last lick of polish to your baby, an enormous flash fills the room and a second time machine stands before you. A mirror image emerges and tells a tale of an endangered planet and how its destruction could spell disaster for earth. And so begins Time Machine; an adventure spanning three time zones and over a hundred locations.

Although the game uses a text interface, many scenes are backed up by quality cartoon-style graphics, so there's no need to put your imagination into overdrive. The descriptions themselves are equally good, although the shaded font can be a bit tricky to read at times. And that's just about it – Time machine is a text adventure with more than a hint of Level 9 (Lords of Time anyone?) atmosphere, and that's a big complement coming from this geriatric hack.

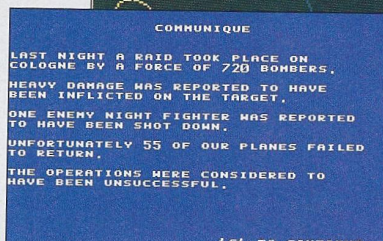


War Over The Reich

Floppyhop • £2.50 • Any ST

War Over The Reich is a strategy game that transports you back in time to 1943. Under your command, you have the air power of the RAF and the idea is to plan a series of raids on targets over 'other side of the water. Weather conditions, crew morale and diversion tactics must all be considered as you plot your waypoints over to the continent.

Points are scored based on the success of each raid and the strategic importance of the target in question. The interface is relatively easy to cope with once you've given the manual a look through, but there is a distinct lack of action – the fate of each plane lies entirely in the hands of the ST; and the report screen, with its little coloured specs for hits, hardly conveys the tension of the battle. At least you can split things up a bit by saving your progress. Although not an awful game by any means, War Over The Reich is probably best left to die-hard strategy fanatics.



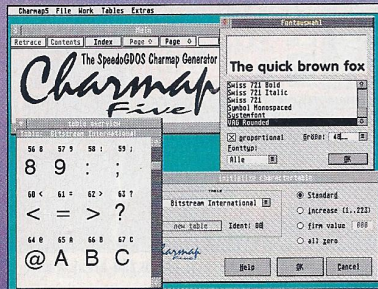
Choose your planes, plot your course and hope for the best. I can hardly bear the tension!

The results of a raid are all reduced to text and displayed on completion.



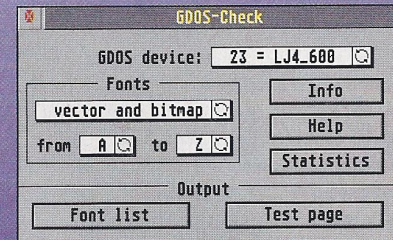
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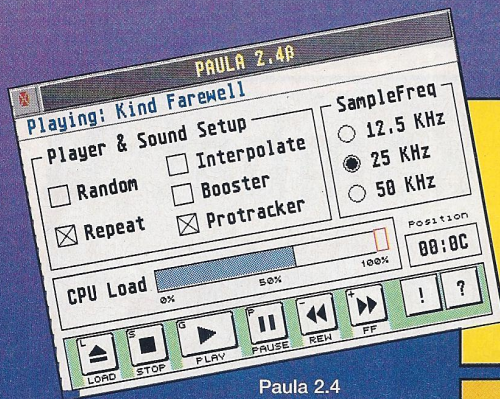


Charmap5

No matter how much coverage the ST Magazines give to Public Domain & Shareware, they only give you a sampler of the vast range available. As one of the longest established ST libraries in the World, we are constantly adding new titles to our, already extensive collection, so why not send today for our comprehensive PD & Shareware Guide, it's now approaching 260 pages, with good descriptions, screen shots, etc.



GDOS-Check 2.0



Paula 2.4

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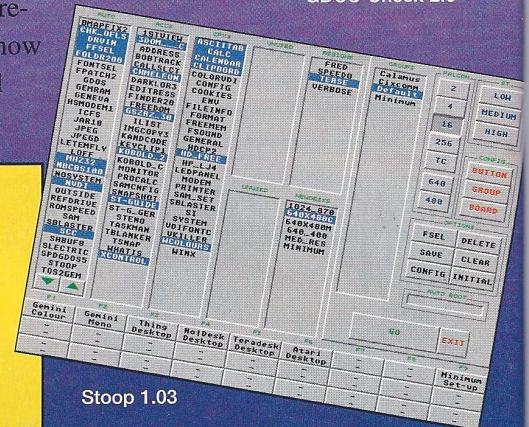
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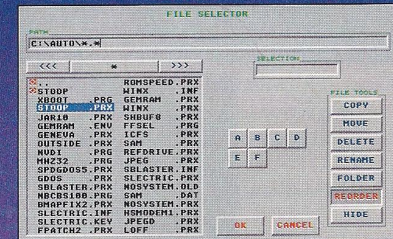
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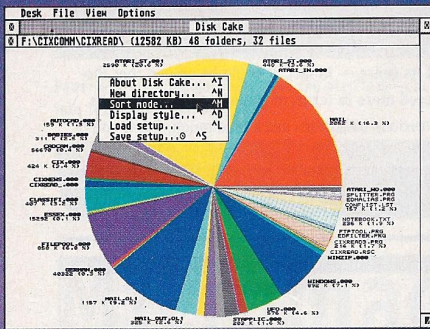
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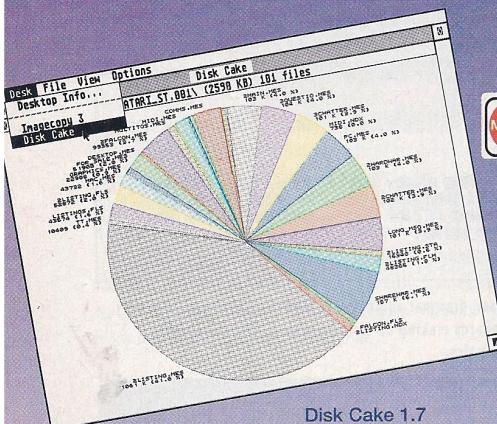
Stoop 1.03



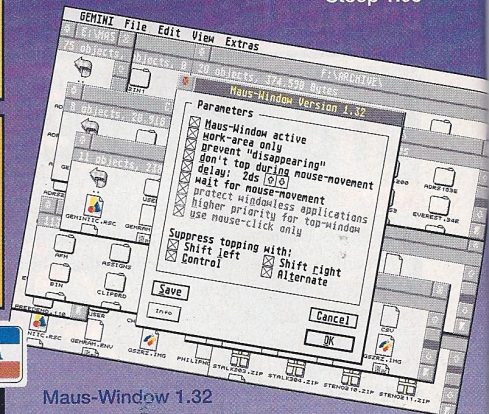
Stoop 1.03



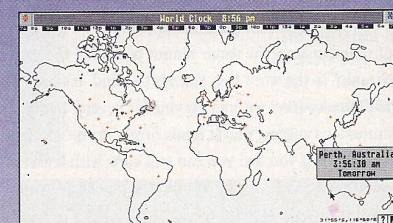
Disk Cake 1.7



Disk Cake 1.7



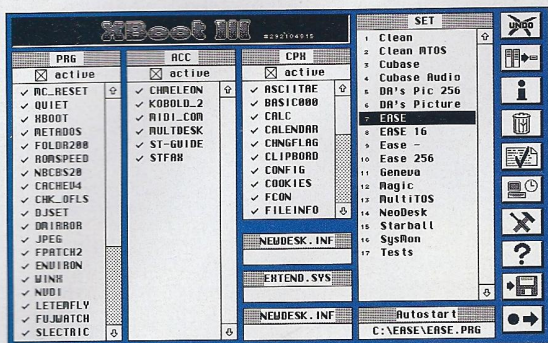
Maus-Window 1.32



World Clock 1.0a

STranded

If you were stuck on a desert island, which ST programs would be at the top of your list? Reader *Pete Dean* kicks off a new series...



XBoot

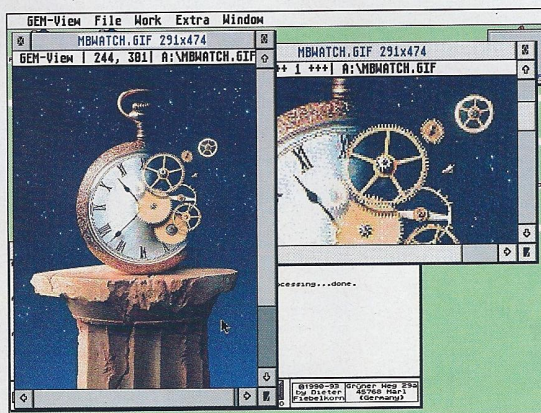
With a hard drive, the most indispensable item has to be XBoot 3. When I power the drive up, I don't have to worry about the configuration of any files – they are all ready to go. With three GDOS configuration files for different applications, I simply select the application I want and XBoot does the rest. It also allows me to select the accessories and resolution I want to boot in. Before a clock cartridge was added, I used it to put in the date and time – nice if you are typing a letter in Protext as Alternate-D automatically puts the date in for you.

Chameleon

Deciding which desk accessories are going to be needed is awkward – the one you need is never one of the handful loaded! Enter Chameleon. This useful little utility lets you load accessories as required and then ditch them when you finish. Because of Chameleon, I don't generally load any accessories at all, leaving an empty slot instead. This saves on memory, and still gives me a good degree of choice – wonderful! It has never failed yet – I even load GEMView 3 as an accessory. For those of you without much RAM, this little tool is very useful. My copy came from an old ST Review cover disk but most PD libraries should have it on file.

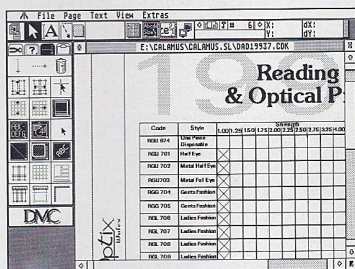
GEM-View

As I do a fair amount of DTP work, I have a huge library of picture files in various different formats, ST and PC alike. These have to be fairly portable, and I was



Nice 'View – GEMView 3, the supreme graphics utility.

sufficiently impressed with the ST Review cover disk version of GEMView 3 to buy the full version. It not only allows me to change the format of the file, but rotate and resize as well. With a mono printer, the dithering techniques make mincemeat of turning colour files into black and white. I've only scratched the surface of this excellent program but this is power with a capital P!



Quality DTP – Calamus 1.09n is the epitome of power without the price!

Calamus 1.09n

Not only for work but also for fun, Calamus 1.09n is brilliant. I have to use an IBM machine in my job but nothing in Windows gives me the same sort of control and quality.

The program is easy enough for a casual user to get decent results, but powerful enough to give the serious DTP'er an awful lot of scope. The program has already been used to create menus for the pubs and restaurants in my local area.

Frontier Elite 2

How do I waste away the spare hours? If I was going to be economical with the truth, I could say that I use Devpac for programming my own games, but I'm not that good a coder! Championship Manager is fun, but after winning everything for the last six seasons it's getting boring. At the moment, Cannon Fodder is absorbing my time but I

reckon I'll finish that in a few weeks. While I still love killing things with F-19 Stealth Fighter, there is one game that comes out on top, and can be played as many times as you want – Frontier Elite 2. All I ask for is an Imperial Courier as they never seem to get hit!

I reckon that this little lot will keep me happy for the moment. Future purchases are likely to include Calamus SL, but only when necessary as 1.09n presently does any job I ask of it. If Mr. Braben can ever improve on Frontier, I'll be first in the queue – and that MagiC program looks very interesting...



Jeux sans frontière – Elite 2 must rate as the ultimate shoot-'em-up.

Equipment

Pete's setup consists of the following: 4 Mb STe, 22Mb hard drive, second floppy drive, mono and stereo colour monitors, Citizen ProJet printer and a hand scanner.

TOP BYTE software

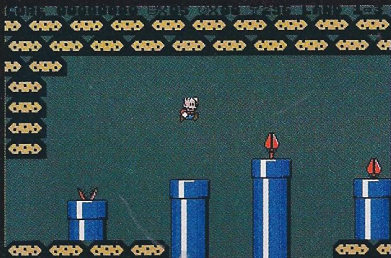
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Q&A

You send in the questions - our team of experts sets about solving them...

Hard choice



Q I bought my STFM when they had single sided

drives. I have since replaced the drive with a high density drive and upgraded the memory to 2.5 MB. I want to upgrade my operating system which is TOS 1.0. All the latest upgrades 2.06 seem to fit over the ROM chips or the CPU. My ROM chips are under the PSU and the CPU is under the disk drive hence no space for upgrades. Do you know of an upgrade that will fit, the reason is that I have been told that TOS 1.0 should not be used with hard drives, is this true and why?

Also, the latest software seems to be STe/Falcon specific so I was thinking of getting an STe but I have been told that they cannot be modified or upgraded i.e. putting my HD drive from my STFM or adding PC emulator etc, is this true?

By the way, Atari World is a great magazine and I'm glad to see the ST Review team continuing on their own. Will you be doing a binder for Atari World magazines?

Graham Rayner, Herts

A When your CPU and TOS ROMs are in such an unfortunate position it is time to call in the experts. This is not a job you should try yourself; however I'm sure one of the top ST engineering companies will be able to sort your machine out with a TOS upgrade. Try speaking to Atari Workshop, Compo and The Upgrade Shop. If none of them can help please let me know.

All the latest software certainly is not STe/Falcon specific. However some of the more exciting games coming out from companies like

Unique Developments are. On the Falcon front, due in part to its superior graphics and the fact that it has a DSP, certain new software can only be implemented on it. Switching to an STe will not let you run Apex media, Cubase Audio or Neon; you would need a Falcon for that.

As far as modification is concerned - yes and no! The STe/STFM argument still rages. Certain STes can be particularly difficult or impossible to upgrade. The problem STes fit into three types:

- 1) Those with a faulty DMA; see last month's tip.
- 2) Those that have SIPP not SIMM memory expansion. These need someone with good soldering skills to upgrade the memory.
- 3) Those that have the main 68000 processor surface mount, not in a socket. Most STe machines have socketed processors and hence can be upgraded.

You don't say which high density drive kit you used to upgrade your STFM. The very strong likelihood is that it will work in an STe but check with your supplier first. If you buy a normal STe, i.e. one that does not have the problems I've listed here, then on balance it will be easier to upgrade than your difficult STFM with the TOS ROMs and processor in such a horrible (and unusual) position.

Glad you appreciate us; I'll pass on your thoughts about the *Atari World* binder.

Maurice Collins

Mouse mishap



Q Help! After using my machine, a STFM, for a

while I find that my mouse inverts,

Send us your questions

Can't find anyone to answer that nagging question? Then drop us a line. Our team of experts are on hand to investigate and solve almost anything you can throw at them. Just send your letters to:

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or e-mail them to:

atari_world@cix.compulink.co.uk

While every effort will be made to answer your question within the pages of *Atari World*, please note that individual correspondence cannot be entered into.

down becomes up and vice versa.

I've owned the machine for some time and I'm wondering if I have a hardware fault that's causing this mouse problem? If you could help me out and give me the name of a company who could fix my STFM I'd appreciate it.

Roger Briggs, Hartlepool

A Don't worry Roger! Your machine is in perfect order. Unfortunately you've picked up the infamous Ghost virus. This little blighter causes the mouse inversion you describe. Sadly, due to a terrible accident with a magazine cover disk, this virus was spread far and wide across the Atari owning community and is the most common virus on the Atari. Thankfully, apart from the chance that it could destroy the boot sector of a game disk it is entirely harmless - but that's no great comfort.

What you need to do is this: look through the PD library adverts in this magazine and find one that sells a virus killing program. Use it to clean up every disk in your collection. If you'

If you've got a lot of game disks, I'd recommend you get Richard Karsmakers' excellent Ultimate Virus Killer (UVK). This is the king of virus-killing programs and will even replace damaged boot sectors on game disks and other commercial disks if the virus has spread to them. This might be a rather long job but it's the only approach to effective eradication of viruses.

To save having to repeat this process take some time out to think about prevention. Some 99% of viruses are loaded when you turn on or reset your machine - so if you make up a boot disk, check it with a virus killer, write protect it and then always boot with that disk in the drive and you'll be OK. Hope this helps.

Joe Connor

Port puzzlement



Q I wonder if you can help me? I'm thinking about

buying a hard disk drive but am confused by the differences between DMA, ACASI and SCSI ports. Does my machine, a 3 year old STe, have these ports?

Alan Brightcock, Scunthorpe

A Yes, your machine has a DMA port (all Ataris except Falcons have one) and no, your STe doesn't have a SCSI port (Falcons do have one of these). When the Atari was first developed the designers decided to use a 'not-quite' SCSI protocol to handle devices connected to the DMA port. They called it 'ACSI' and it's one of the things that have turned Atari computers into a minority machine. While SCSI devices were becoming commonplace - and therefore cheaper - third party device designers had to work hard to develop ACSI compatible hard disks.

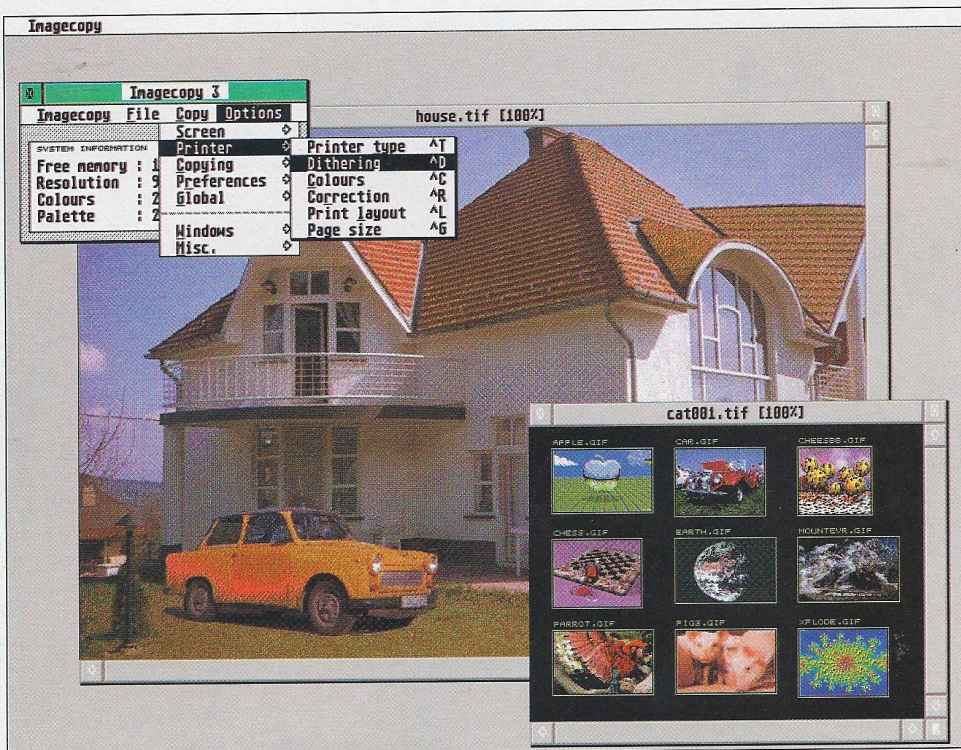
All is not lost however. There are now a number of SCSI adapters that are available, reasonably cheaply, which can give your machine a full SCSI port. Two of the best are the ICD Link 2 and the Translator. The former is available from a number of companies and comes with ICD driver software, priced around £80. The Translator is available from Systems Solutions, comes with HD Driver software, and retails at £69.95.

Maurice Collins

Fancy earning a tenner?

All you have to do is send us a useful tip for your favourite program - what could be easier!

Send us your hint on a disk, saved as a text file (preferably), along with a screenshot for illustration, or possibly a drawing if it's a "you can build this" style tip. We'll pay £10 for every reader hint that we publish.



Print problem



Q Could you please help. I have an Atari 520

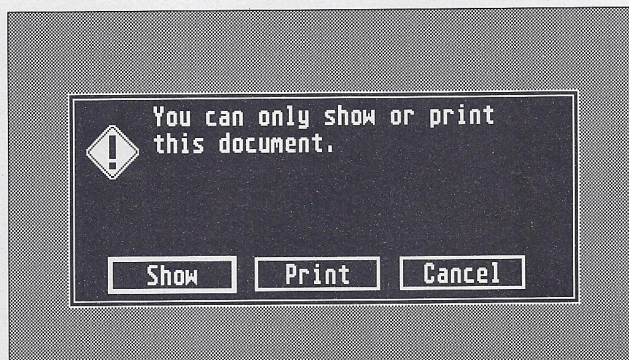
STFM computer and a recently acquired printer P2Q. The printer works all right on test. However, I cannot get it to Print Screen. Could you please tell me how to get the computer to do this.

G Scholis, Manchester

A I'm not sure what a P2Q is, an NEC P2 perhaps? It is possible that the printer you describe is second hand and archaic in which case it might not work with an ST - or indeed any other modern computer! Before trying to get a screen dump, the first step is to set about getting some more basic communication going between your ST and printer. To do this we start by using the simple principal that no matter what the printer - with the notable exception of the Atari SLM laser - if you send it straightforward ASCII characters it will print them. No special control codes or printer drivers are required - send a printer ASCII A and it will print an A.

The easiest way to do this is to double click on any ASCII file from the desktop and you will get a GEM message - Show Print or Cancel. Click on print and see what happens. If this does not print then the ST and printer

Imagecopy is the best screen dump utility around - and a lot more besides.



are not talking to each other at all. You have a hardware problem.

I don't like the standard desktop approach to doing a print screen - it's too difficult to make it work, particularly when you are uncertain about the exact details of your printer. However if you want to try, then use the standard GEM combination to print the screen - press Alternate and Help keys together. Some configuration maybe required using the control panel to configure the printer correctly.

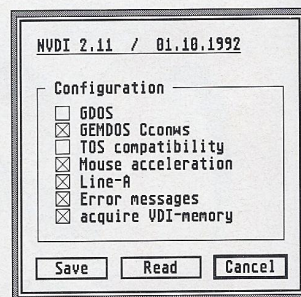
Before we go to printing the desktop, let's look at what we are trying to do. The Atari operating system is a graphical system. Hence in order to print graphics the printer has to be told to go into graphics mode and print according to a stream of dots we send it - even if we have the character A on the screen when printing the screen we send the dot

information to the printer that makes up the character A. Hence the printer needs to behave in a relatively standard way - some very old dot matrix printers can't even print graphics! So the next step is to get the printer printing graphics - try printing from paint or vector graphics programs using every printer driver you can find.

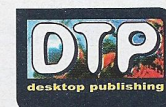
Once you have got some graphics printed then the final piece of the jigsaw is doing a screen dump. I'd recommend an approach based on first taking a screen grab and saving it as an image file. Imagecopy is by far the best thing for this as it will snap the screen and has a huge range of printer drivers too.

This is about as far as we can go without setting eyes on the hardware. I hope it works!

Maurice Collins



Hi speed Timeworks



Q I've been using Timeworks ks 2 for ages, having

upgraded from the ST Review giveaway. I have recently obtained NVDI 2.5, which is terrific, but my problem is I just cannot get it to work with Timeworks.

I'm sure I must be missing something obvious, but the NVDI manual is no help (it's lousy, actually). Can you help? My machine is a 4MB STe 1.62 with mono monitor and hard drive. Thanks!

Paul Westerman, East Sussex

A Easy! You can't use the GDOS part of NVDI 2.5 - just the accelerator. Simply switch off GDOS in the NVDI configuration accessory and run GDOS as normal but ensuring that it runs after NVDI in the Auto folder. Oh and I do agree with you about the NVDI manual, trouble is the software is just so good you have no choice but to put up with it, no ST can do without it!

Maurice Collins

Photos on CD



Q I was very interested to read Ofir Gal's article

"Photo Finish" in the September issue of Atari World, in particular his quote "There is now a wide selection of pre-scanned images available in the PhotoCD format, covering everything from wildlife and landscape to food and sports". Can you tell me if this material is compatible with a Kodak PhotoCD player model 265? If so, where can I obtain the discs - the current issue of CDI magazine lists only one disc.

Is it possible to marry the Kodak PhotoCD player to the Atari? I would imagine it requires a digital output and I do not believe that one is available - it presumably requires a CD ROM drive to do this.

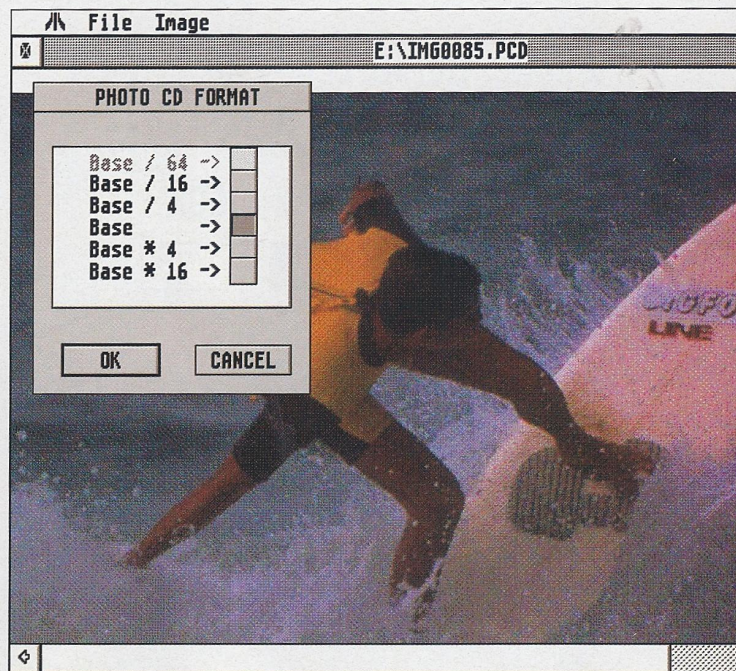
Reg Woodward, Nottingham

A Yes the commercially produced PhotoCDs like the Corel collection can all be viewed on your Kodak player but you can't hook it up to your Atari.

You're looking in the wrong place. Most PC magazines carry adverts from firms specialising in CD ROMs and these can all be read by Atari drivers and Atari compatible drives. The range is growing rapidly and there are collections covering just about every topic you can imagine from views of the planets to wildlife and plants.

In the Atari market two firms spring to mind as specialists in CDs - 16/32 and System Solutions. Dare I say it though but you will probably find more choice and better prices if you take a look outside the Atari market for 'non Atari-specific' CDs.

Maurice Collins



PhotoCD courtesy of Studio Convert

On the Marpet



Q For some time I have been considering

upgrading my STe with 4Mb of RAM to 12Mb using a Marpet +8 board.

Compo, however, has advised me that the Marpet +8 'doesn't work', and that although there is an alternative option - a kind of special card - this would 'cost an arm and a leg'.

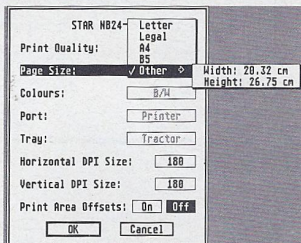
This is the first I have heard of problems with the Marpet +8 board, and of an alternative option. Can you advise what the problems with the Marpet +8 board are, whether STes already upgraded to 12Mb are likely to have these problems, and what the alternative option entails, and its cost?

Pete Rimell, Birmingham

upgradable to a massive 128Mb of RAM (if you can afford it all!). There are many different options so it's best to speak to them directly.

If it was me spending that sort of money I'd buy a Falcon or a second hand TT instead - these can both be upgraded to lots of RAM and, if you buy second hand, you are likely to make significant savings compared to the PAK option.

Maurice Collins



B-b-big paper



Q I've finally got Timeworks 2.04 working with

Speedo 5 and it is excellent - much faster than the earlier version and the print quality is excellent on my Epson Stylus Printer.

I've still got a problem though. I'm doing a project and feed 6" by 16" paper through the Stylus in landscape mode. With the earlier version using GDOS 1.1 this works but using Speedo only about half is printed then the page ejects. Any ideas?

Mr Butt, Leeds

A I'm glad you like 2.04 as much as it impressed us here. I think the problems is that you need to configure the Speedo printer driver. Try running the Speedo drivers accessory and increasing the page size - that should solve your problem. Incidentally you will need to use the Star NB24 driver in 180 dpi mode to do this.

Maurice Collins

A These are "features" of the Falcon, Tim, and nothing to be too concerned about. Everyone I know gets the keyclick problem (just bash a key and carry on with the boot) and the comms problem seems to vary from Falcon to Falcon; some have it, some don't.

You can get rid of the latter problem entirely by booting with HSMODEM - see issue 6 for full instructions on setting it up - as this will also speed up the data transfer rate between your Falcon and your modem. You should find it on most Atari bulletin boards.

Maurice Collins

Falcon foibles



Q Last year I bought a Falcon and am very happy with my

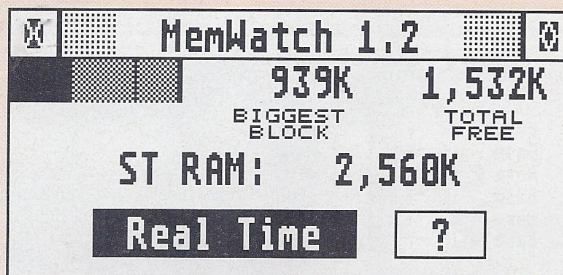
purchase. However there are a couple of niggles with the system that really annoy me and have made me a bit worried that I have a hardware fault.

Firstly, sometimes when I boot up it sounds like a key is held down on my keyboard. I've checked for a 'sticky' key but can't find one. Secondly, when I boot-up my Falcon won't talk to my modem but if I warm-boot then it works and carries on working until the next time I switch the machine off and turn it on again. Do I have a fault with my machine? I still have half a year's warranty left and am wondering if I should take it back for repair.

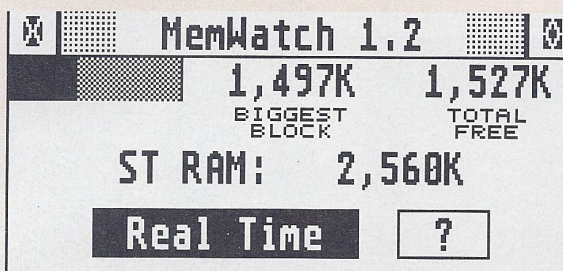
Timothy Corne, Aylesbury

A Compo are quite right. The Marpet board is not available, either in STe or Mega ST form. According to Marpet, on the Mega ST you get problems accessing the hard drive and they still can't get the STe version to work. As far as we are aware there are no STes out there with this memory board fitted and working.

Your obvious alternative is the PAK board from System Solutions. This combines an accelerator and extra memory. It is expensive and it requires the ST to be put into a new case. You get a very fast system



Before the magic ingredient...



... and after.

More mem

TIP Users of the absolutely wonderful Ease desktop replacement may have noticed a distinct lack of memory. With my 2.5 Mb STFM, while I don't grumble too much about the 450k of memory taken up by Ease, I have found that the remaining free memory is fragmented so that only just over half of it is actually usable (Figure 1).

However, if you install the Chameleon desk accessory, with it configured to automatically load some accessory or other (it doesn't seem to matter what) the fragmentation almost completely vanishes, giving me an extra 500k of memory to play with (see Figure 2).

Geoff Wilson

HP hassles



Q I would be grateful for your assistance with

a Falcon printing problem.

I have a 14Mb Falcon (about 2 years old) connected to a LaserJet III printer (with 2Mb of on-board RAM) via a 2 metre cable (using the parallel port). I find that the output is very variable. I can use Papyrus and Calamus but when a second page is loaded I sometimes get "garbage" printed instead. It is almost as if a buffer is filled which will not clear. I also, fortunately, have an STe and have no problems printing from this. I have tried the Falcon with a DeskJet 500C and again, seem to have no problems.

I have tried running the computer without any accessories or Auto programs, and again the problem persists.

PS Congratulations on an excellent magazine.

A P Plumb, Kent

Double Dutch desktops



Congratulations on setting up another Atari based mag for us all to read and enjoy. After noticing all the tips in issue 2 scattered around the mag and also adding to the customised desktop article in ST Source I have a nice little way of customising desktops using the standard DESKTOP.INF file.

Almost everyone who owns an ST is competent enough to alter the names of the floppy drive icons and most people have even worked out how to change the name of the trash can to something amusing such as Black Hole or Incinerator. However I have now discovered how to alter the actual icons, exchanging one for another.

First of all, make yourself a normal DESKTOP.INF file. Then load it into a nice little editor such as Tempus or Everest (note that some editors such as First Word may not load DESKTOP.INF files).

Scroll along until you find the names of all your drives and also the things which say *.PRG@ and so on. The disk names and trash icons are preceded by FF and several rows of numbers. Each number immediately before the FF should be a 0 except in the case of the Trash can which is preceded by a 2. Alter this number to turn the icon into any of the ones below:

- 00 The standard drive icon
- 01 The folder icon
- 02 The Trash can
- 03 A normal program icon
- 04 A text or data file

It is also possible to alter the icons for programs, folders and other files. The number for all executable files is 03 and is on the same line as *.PRG@ or whatever you want to alter. To change folders or data file icons do the following:

Sandwiched in the middle of the areas you have been editing are two other lines. This is what they should look like:

```
#F FF 04 @ *. *e
```

```
#D FF 01 @ *. *e
```

The top one is for data files, the bottom one is for folders. Alter the numbers 04 and 01 accordingly, consulting the chart above.

Daniel Baker, Milngavie

Hmmm. Quite why you'd want replace your floppy drive icon with a waste bin is beyond me. Never mind, I spent an enjoyable long weekend in Scotland earlier this year and the people up there were wonderful. Have a tenner! - Ed.

A This is quite a common problem with HP printers. The way a parallel printer works is that there are 9 important lines between the computer and the printer - 8 data lines and a strobe line. The printer holds all of these lines high, to send information the Atari has to pull them low. In order to do this the Atari uses the sound chip. This chip is common to STs and the Falcon.

Needless to say the HP is particularly well engineered and takes its end 'firmly' high - leaving the Atari with more work than normal to pull the signal low. Result - the poor old sound chip can't cope, it gets hot and then problems start.

There are two easy ways to fix it. One is to buy a commercial external print buffer. This has the dual effect of

providing a print buffer and also of providing a stronger signal to the printer. You should find these advertised in *Computer Shopper* magazine. The alternative is to contact C & P Rossiter who produce a plug in gismo that simply boosts the signal for you. Call them on 0115 9681870.

It's not a hardware problem specific to your machine - if you take 20 STs, a handful will give problems with your laser but all will work fine with a dot matrix or an inkjet printer.

Richard Barton

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ANNOUNCING...

THE ATARI World

The Atari World Christmas Shows are happening on the 9th and 10th December in Birmingham and London.

Who will be there?

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CHRISTMAS SHOWS



Where is it?

Saturday 9th December

National Motorcycle Museum, Birmingham

Sunday 10th December

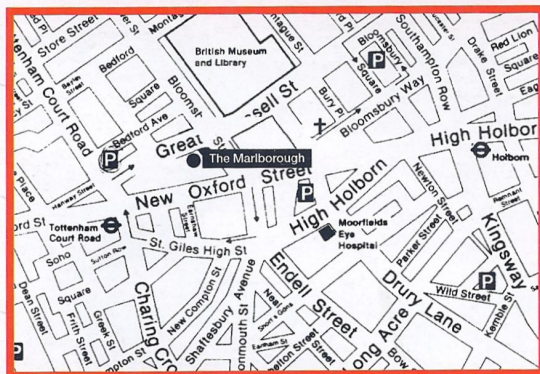
Marlborough Hotel, Bloomsbury Street

London WC1B 3QD

What time is the Show on?

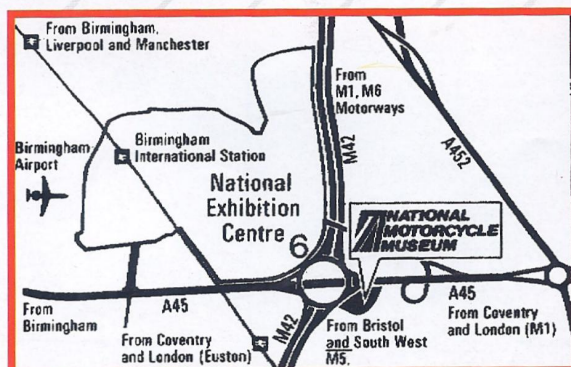
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How do I get there?



The Marlborough is 3 minutes walk from Tottenham Court Road tube station.

Regular bus services run from Birmingham International Station to the National Motorcycle Museum.



How much does it cost?

£5 before 14:00, then £3, under 16's free when accompanied by an adult.

Can I park?

Yes. There is ample free parking at the Motorcycle museum and the parking meters are free around the Marlborough on a Sunday - if you can find a space!

I live a long way from London and Birmingham – Are there any special arrangements for me?

Sure are. We have some regional representatives who will try and put you in contact with other people making a long journey. Phone up and maybe you will end up with a car share or even a minibus of like minded Atari freaks!

Phineas Pope at Merlin -	Tel 01452 770133
Brian Stanton -	Tel 01292 313497
Denesh Bhabuta -	Tel 0161 796 5864
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At each show there will be 3 seminars hosted by Atari World editor Mr Andrew Wright.

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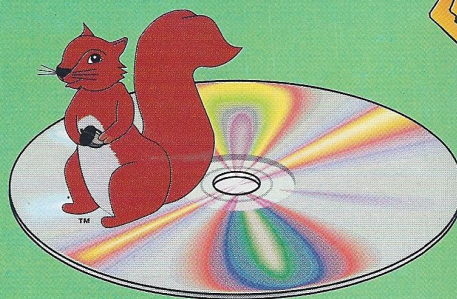
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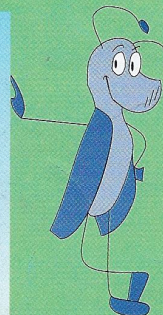
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